```
     FILE 'HCAPLUS' ENTERED AT 16:21:07 ON 28 APR 2010
L1          3611 S PNEUMOCOCCUS
L2          3604 S CAPSULAR(W)(POLYSACCHARIDE OR OLIGOSACCHARIDE)
L3           236 S L1 AND L2
L4         26079 S QUINOVO? OR FUCO?
L5             4 S L3 AND L4
L6          6729 S REDUCTIVE AMINATION
L7             1 S L3 AND L6
L8             2 S L1 AND L6

     FILE 'REGISTRY' ENTERED AT 16:51:09 ON 28 APR 2010
L9                STRUCTURE UPLOADED
L10            0 S L9
L11            1 S L9 SSS FULL

     FILE 'HCAPLUS' ENTERED AT 16:52:20 ON 28 APR 2010
L12            1 S L11
L13       194606 S AMINATION OR CONJUGATION OR CONJUGATE OR BOROHYDRIDE OR CYANO
L14           44 S L3 AND L13
L15            0 S L14 AND TYPE(W)(5 OR V)
L16        17660 S TYPE(W)(5 OR V)
L17            0 S L14 AND L16
L18      1235348 S V
L19            1 S L14 AND L18
L20           26 S L14 AND (PY<2003 OR AY<2003 OR PRY<2003)
L21      1751257 S REDUCTION OR REDUCED
L22           19 S L3 AND L21
L23           17 S L22 AND (PY<2003 OR AY<2003 OR PRY<2003)
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=> file hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.22       0.22

FILE 'HCAPLUS' ENTERED AT 16:21:07 ON 28 APR 2010
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 28 Apr 2010  VOL 152 ISS 18
FILE LAST UPDATED: 27 Apr 2010  (20100427/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Feb 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Feb 2010

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the first quarter of 2010.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s pneumococcus
L1        3611 PNEUMOCOCCUS

=> s capsular(w)(polysaccharide or oligosaccharide)
          8100 CAPSULAR
         74889 POLYSACCHARIDE
         34842 OLIGOSACCHARIDE
L2        3604 CAPSULAR(W)(POLYSACCHARIDE OR OLIGOSACCHARIDE)

=> s l1 and l2
L3         236 L1 AND L2

=> s quinovo? or fuco?
           498 QUINOVO?
         25712 FUCO?
L4       26079 QUINOVO? OR FUCO?

=> s l3 and l4
L5           4 L3 AND L4

=> d l5 1-4 ti abs bib hitstr

L5   ANSWER 1 OF 4  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Characterization of the cross-reaction between type 19F(19) and 19A(57)
     pneumococcal capsular polysaccharides:  compositional analysis and
```

immunological relation determined with rabbit typing antiserums
AB The immunol. relation, physicochem. characteristics, and chemical composition of
types 19F(19) and 19A(57) within the cross-reactive group 19 pneumococcal capsular polysaccharides were studied. By using rabbit hyperimmune diagnostic antiserums in agglutination, immunodiffusion, quant. precipitation, and
absorption assays, extensive cross-antigenicity and cross-immunogenicity were demonstrable between the disease-associated types 19F(19) and 19A(57). Both types 19F(19) and 19A(57) polysaccharides contained trace amts. of protein and nucleic acid and had comparable mol. sizes as determined by gel filtration. Type 19F(19) contained rhamnose, glucose, N-acetylmannosamine, and a phosphate ester. Type 19A(57) contained these 4 moieties, and in addition, contained fucose, galactose, and N-acetylglucosamine. Plans for using this information to evaluate current and proposed formulation of multivalent pneumococcal polysaccharide vaccines are discussed.
AN 1979:70401 HCAPLUS <<LOGINID::20100428>>
DN 90:70401
OREF 90:11143a,11146a
TI Characterization of the cross-reaction between type 19F(19) and 19A(57) pneumococcal capsular polysaccharides: compositional analysis and immunological relation determined with rabbit typing antiserums
AU Krishnamurthy, Thaiya; Lee, Chi-Jen; Henrichsen, Jorgen; Carlo, Dennis J.; Stoudt, Thomas M.; Robbins, John B.
CS Bur. Biol., Bethesda, MD, USA
SO Infection and Immunity (1978), 22(3), 727-35
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L5 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2010 ACS on STN
TI The capsular polysaccharide of pneumococcus type XII, SXII
AB Crude type XII polysaccharide was found after chromatography on Dowex 1 columns to contain appreciable amts. of C-polysaccharide as well as chondroitin 4-sulfate, the latter presumably arising from the culture medium. Final purification by precipitation of SXII with type-specific antiserum,
con-canavalin A, or (NH4)2SO4 eliminated these contaminants. Purified SXII consists of 2 parts hexosamine and 3 parts of neutral sugars. The hexosamine fraction contained equimolar amts. of D-galactosamine and L-fucosamine, and the neutral sugars, D-galactose and D-glucose, similarly were present in equal concns. Periodate oxidation of purified SXII destroyed only the neutral sugars, supporting previous suggestions that these may be 1 → 2 linked.
AN 1966:474800 HCAPLUS <<LOGINID::20100428>>
DN 65:74800
OREF 65:14007a-b
TI The capsular polysaccharide of pneumococcus type XII, SXII
AU Cifonelli, J. A.; Rebers, P.; Perry, M. B.; Jones, J. K. N.
CS La Rabida Univ. of Chicago Inst., Chicago, IL, USA
SO Biochemistry (1966), 5(9), 3066-72
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English

L5 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Structural studies on the capsular polysaccharide of

Pneumococcus Type V
AB Further details of the structure of the capsular polysaccharide (SV) of Pneumococcus Type V have been elucidated by methylation studies and by oxidation with periodate. The polysaccharide contains multiple residues of 2-acetamido-2,6-dideoxy-3-O-(D-glucopyranosyluronic acid)-L-galactose, to which are attached residues of D-glucose and 2-acetamido-2,6-dideoxy-L-talose (N-acetyl-L-pneumosamine). Residues of 2-acetamido-2,6-dideoxy-L-galactose (N-acetyl-L-fucosamine) constitute branch points, and pneumosamine residues are present mainly as nonreducing end groups. The majority of the D-glucose and D-glucuronic acid residues are (1 → 4) and (1 → 2) linked, resp. The immunochemistry of SV is reviewed in the light of these findings. 25 references.
AN 1966:438744 HCAPLUS <<LOGINID::20100428>>
DN 65:38744
OREF 65:7257b-c
TI Structural studies on the capsular polysaccharide of Pneumococcus Type V
AU Barker, S. A.; Bick, S. M.; Brimacombe, J. S.; How, M. J.; Stacey, M.
CS Univ. Birmingham, UK
SO Carbohydrate Research (1966), 2(3), 224-33
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English

L5 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Two new amino sugars from an antigenic polysaccharide of pneumococcus
AB Pneumosamine-HCl (I) isolated from Type V Pneumococcus capsular polysaccharide, m.p. 162-3° from MeOH-Et2O, [α]18D +6.9° (10 min.) → 10.4° at equilibrium (c 2.3, H2O), a 2-amino-2,6-dideoxyhexose, was shown not to have either the gluco or galacto configurations by comparison with known compds. Deamination yielded 6-deoxygalactose indicating that inversion had occurred and that I is probably 2-amino-2,6-dideoxytalose (II). Amino sugar X was shown by infrared, m.p., chromatography, and electrophoresis to be 2-amino-2,6-dideoxy-L-galactose (L-fucosamine III). Epimerization of the N-acetyl derivative of II gave N-acetyl III.
AN 1961:54817 HCAPLUS <<LOGINID::20100428>>
DN 55:54817
OREF 55:10566i,10567a
TI Two new amino sugars from an antigenic polysaccharide of pneumococcus
AU Barker, S. A.; Brimacombe, J. S.; How, M. J.; Stacey, M.
CS Univ. Birmingham, UK
SO Nature (London, United Kingdom) (1961), 189, 303-4
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA Unavailable
OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

=> d his

(FILE 'HOME' ENTERED AT 16:20:53 ON 28 APR 2010)

FILE 'HCAPLUS' ENTERED AT 16:21:07 ON 28 APR 2010
L1 3611 S PNEUMOCOCCUS
L2 3604 S CAPSULAR(W)(POLYSACCHARIDE OR OLIGOSACCHARIDE)
L3 236 S L1 AND L2

```
L4        26079 S QUINOVO? OR FUCO?
L5            4 S L3 AND L4

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    15.31      15.53

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -3.40      -3.40

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 16:21:55 ON 28 APR 2010

Connecting via Winsock to STN



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PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 16:50:11 ON 28 APR 2010
FILE 'HCAPLUS' ENTERED AT 16:50:11 ON 28 APR 2010
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    15.31      15.53

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -3.40      -3.40

=> s reductive amination
         72096 REDUCTIVE
         36058 AMINATION
L6        6729 REDUCTIVE AMINATION
                (REDUCTIVE(W)AMINATION)

=> s l3 and l6
L7           1 L3 AND L6

=> d l7 ti abs bib

L7   ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Immunogenic conjugates obtained by reductive amination
     of capsular polysaccharide of serotype 5
     Pneumococcus
AB   The invention provides conjugates obtained from reductive
     amination of Pneumococcus serotype 5 capsular
     polysaccharide.  The conditions for the reductive
     amination are distinguished from the traditional conditions in
     that they make it possible to avoid the appearance of an undesirable
     compound which harmful to the immunogenicity of the conjugates.  In carbon
     NMR, this undesirable compound is characterized by a resonance signal
     between 13 and 14 ppm.  Aminated polysaccharides used in the manufacture of
```

conjugates thus have a carbon NMR spectrum not having a resonance signal between 13 and 14 ppm. The conditions of reductive amination offered by the invention are two. According to a first process, the reductive amination is carried out at a slightly acidic pH (4-6.5) for at most 4 h. According to a second process, the polysaccharide is first reduced, then fragmented, and finally subjected to reductive amination itself, under traditional conditions or not. According to the process used, the structure of the aminated polysaccharide can vary, but these variations are without effect on immunogenicity.

AN 2004:591907 HCAPLUS <<LOGINID::20100428>>
DN 141:139132
TI Immunogenic conjugates obtained by reductive amination of capsular polysaccharide of serotype 5 Pneumococcus
IN Mistretta, Noelle; Danve, Emilie; Moreau, Monique
PA Aventis Pasteur, Fr.
SO Fr. Demande, 40 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | FR 2850106 | A1 | 20040723 | FR 2003-488 | 20030117 |
| | FR 2850106 | B1 | 20050225 | | |
| | US 20040170638 | A1 | 20040902 | US 2004-758142 | 20040115 |
| | AU 2004207647 | A1 | 20040812 | AU 2004-207647 | 20040116 |
| | CA 2512847 | A1 | 20040812 | CA 2004-2512847 | 20040116 |
| | WO 2004067574 | A1 | 20040812 | WO 2004-FR89 | 20040116 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI | | | | |
| | EP 1590373 | A1 | 20051102 | EP 2004-702733 | 20040116 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | BR 2004006819 | A | 20051227 | BR 2004-6819 | 20040116 |
| | NZ 541254 | A | 20080731 | NZ 2004-541254 | 20040116 |
| PRAI | FR 2003-488 | A | 20030117 | | |
| | US 2003-442154P | P | 20030122 | | |
| | WO 2004-FR89 | W | 20040116 | | |

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s l1 and l6
L8 2 L1 AND L6

=> d l8 1-2 tiu abs bib
'TIU' IS NOT A VALID FORMAT FOR FILE 'HCAPLUS'

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APPS -------- AI, PRAI
BIB --------- AN, plus Bibliographic Data and PI table (default)
CAN --------- List of CA abstract numbers without answer numbers
CBIB -------- AN, plus Compressed Bibliographic Data
CLASS ------- IPC, NCL, ECLA, FTERM

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DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers;
              SCAN must be entered on the same line as the DISPLAY,
              e.g., D SCAN or DISPLAY SCAN)
STD --------- BIB, CLASS

IABS -------- ABS, indented with text labels
IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

HIT --------- Fields containing hit terms
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)
              containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
              its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
              its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC --------- Number of occurrence of hit term and field in which it occurs

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codes.  For a list of the display field codes, enter HELP DFIELDS at
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
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FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):ti abs bib

L8   ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Immunogenic conjugates obtained by reductive amination
     of capsular polysaccharide of serotype 5 Pneumococcus
AB   The invention provides conjugates obtained from reductive
     amination of Pneumococcus serotype 5 capsular
     polysaccharide.  The conditions for the reductive
     amination are distinguished from the traditional conditions in
     that they make it possible to avoid the appearance of an undesirable
```

compound which harmful to the immunogenicity of the conjugates. In carbon NMR, this undesirable compound is characterized by a resonance signal between 13 and 14 ppm. Aminated polysaccharides used in the manufacture of conjugates thus have a carbon NMR spectrum not having a resonance signal between 13 and 14 ppm. The conditions of reductive amination offered by the invention are two. According to a first process, the reductive amination is carried out at a slightly acidic pH (4-6.5) for at most 4 h. According to a second process, the polysaccharide is first reduced, then fragmented, and finally subjected to reductive amination itself, under traditional conditions or not. According to the process used, the structure of the aminated polysaccharide can vary, but these variations are without effect on immunogenicity.

AN 2004:591907 HCAPLUS <<LOGINID::20100428>>
DN 141:139132
TI Immunogenic conjugates obtained by reductive amination of capsular polysaccharide of serotype 5 Pneumococcus
IN Mistretta, Noelle; Danve, Emilie; Moreau, Monique
PA Aventis Pasteur, Fr.
SO Fr. Demande, 40 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | FR 2850106 | A1 | 20040723 | FR 2003-488 | 20030117 |
| | FR 2850106 | B1 | 20050225 | | |
| | US 20040170638 | A1 | 20040902 | US 2004-758142 | 20040115 |
| | AU 2004207647 | A1 | 20040812 | AU 2004-207647 | 20040116 |
| | CA 2512847 | A1 | 20040812 | CA 2004-2512847 | 20040116 |
| | WO 2004067574 | A1 | 20040812 | WO 2004-FR89 | 20040116 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI | | | | |
| | EP 1590373 | A1 | 20051102 | EP 2004-702733 | 20040116 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | BR 2004006819 | A | 20051227 | BR 2004-6819 | 20040116 |
| | NZ 541254 | A | 20080731 | NZ 2004-541254 | 20040116 |
| PRAI | FR 2003-488 | A | 20030117 | | |
| | US 2003-442154P | P | 20030122 | | |
| | WO 2004-FR89 | W | 20040116 | | |

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Studies on vaccine control and immunogenicity of polysaccharides of Streptococcus pneumoniae
AB An immunoelectrophoretic method was devised for quantitation of 14 polysaccharide components in pneumococcal vaccine and for determination of their stability in the final container. The individual polysaccharide types, 1, 2, 3, 4, 6A, 8, 9N, 12F, 18C, 19F, 23F, and 25 (Danish nomenclature), were present at 80-123% of the labeled concns. Pneumococcal polysaccharide types 3, 6A, 9N, and 19F, used as representative types, were heated at 37° for 24 h and stored at 4°. The concns. of these polysaccharides remained constant over a 12-mo. period, and the mol. sizes of types 3 and 9N were stable during storage. In contrast, the mol. sizes of types 6A and 1.F declined gradually during storage. Pneumococcal type

19F polysaccharide was conjugated to various proteins, i.e., bovine serum albumin, human Ig, and pneumococcal R61 cell wall protein, by reductive amination. Immunization of mice with 19F polysaccharide-protein conjugates increased formation of antibody. Young mice exposed to pneumococcal type 19F polysaccharide-protein conjugate during gestation and suckling had a greater antibody response than did mice that received no type 19F polysaccharide-protein conjugate while suckling or received the conjugate only when they were 2 wk old.

AN 1981:538439 HCAPLUS <<LOGINID::20100428>>
DN 95:138439
OREF 95:23086h,23087a
TI Studies on vaccine control and immunogenicity of polysaccharides of Streptococcus pneumoniae
AU Lee, Chi-Jen; Lin, Kuei-Tang
CS Div. Bacterial Prod., Food and Drug Adm., Bethesda, MD, USA
SO Reviews of Infectious Diseases (1981), 3(Suppl.), 51-60
CODEN: RINDDG; ISSN: 0162-0886
DT Journal
LA English

=> file reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 30.43 | 30.65 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | -5.95 | -5.95 |

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 27 APR 2010 HIGHEST RN 1220561-71-6
DICTIONARY FILE UPDATES: 27 APR 2010 HIGHEST RN 1220561-71-6

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TSCA INFORMATION NOW CURRENT THROUGH January 8, 2010.

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http://www.cas.org/support/stngen/stndoc/properties.html

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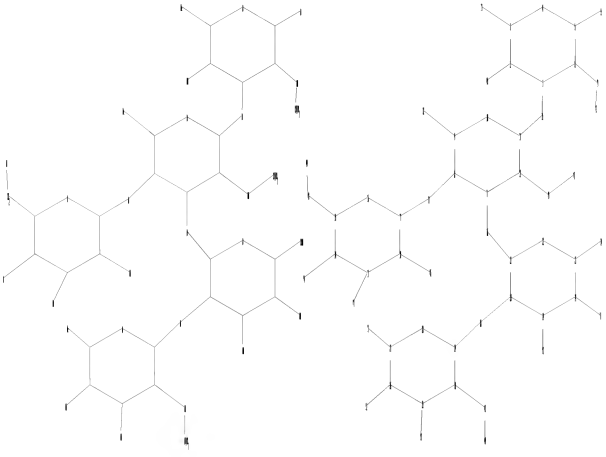

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52 53 54 55
ring nodes :
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24 25 26 27 28 29 30
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17-37 18-46 19-51 20-38 21-36 23-34 24-50 25-53 26-52 27-33 29-38 30-41
39-42 40-43
41-44 48-49
ring bonds :
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14-15
15-16 16-17 17-18 19-20 19-24 20-21 21-22 22-23 23-24 25-26 25-30 26-27
27-28 28-29
29-30
exact/norm bonds :
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9-10 10-11 11-12 11-35 12-40 13-14 13-18 13-47 14-15 14-54 15-16 16-17
17-18 17-37 18-46
19-20 19-24 19-51 20-21 20-38 21-22 21-36 22-23 23-24 24-50 25-26 25-30
25-53 26-27
26-52 27-28 28-29 29-30 29-38 30-41 39-42 40-43 41-44

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exact bonds :
3-31  9-32  15-48  23-34  27-33  48-49


Match level :
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31:CLASS  32:CLASS
33:CLASS  34:CLASS  35:CLASS  36:CLASS  37:CLASS  38:CLASS  39:CLASS  40:CLASS
41:CLASS  42:CLASS
43:CLASS  44:CLASS  45:CLASS  46:CLASS  47:CLASS  48:CLASS  49:CLASS  50:CLASS
51:CLASS  52:CLASS
53:CLASS  54:CLASS  55:CLASS



L9      STRUCTURE UPLOADED

=> d l9
L9 HAS NO ANSWERS
L9              STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l9
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SAMPLE SCREEN SEARCH COMPLETED -      478 TO ITERATE

100.0% PROCESSED      478 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          8249 TO    10871
PROJECTED ANSWERS:                0 TO        0

L10           0 SEA SSS SAM L9

=> s l9 sss full
FULL SEARCH INITIATED 16:52:11 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     9632 TO ITERATE

100.0% PROCESSED     9632 ITERATIONS                                1 ANSWERS
SEARCH TIME: 00.00.01

L11           1 SEA SSS FUL L9

=> d l11

L11  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2010 ACS on STN
RN   725710-26-9  REGISTRY
ED   Entered STN:  12 Aug 2004
CN   β-D-arabino-Hexopyranose, O-2-(acetylamino)-2,6-dideoxy-α-L-
     talopyranosyl-(1→2)-O-β-D-glucopyranuronosyl-(1→3)-O-
     [β-D-glucopyranosyl-(1→4)]-O-2-(acetylamino)-2,6-dideoxy-
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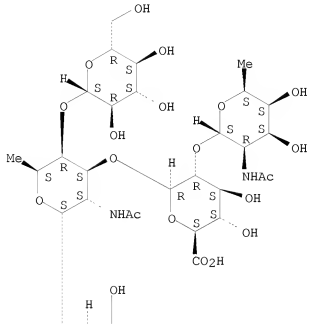
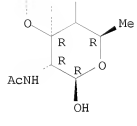
α-L-galactopyranosyl-(1→3)-2-(acetylamino)-2,6-dideoxy-,
(4ξ)- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C36 H59 N3 O24
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.

PAGE 1-A




PAGE 2-A




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file hcaplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

FULL ESTIMATED COST 194.13 224.78

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE ENTRY TOTAL SESSION

CA SUBSCRIBER PRICE 0.00 -5.95

FILE 'HCAPLUS' ENTERED AT 16:52:20 ON 28 APR 2010
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


FILE COVERS 1907 - 28 Apr 2010 VOL 152 ISS 18
FILE LAST UPDATED: 27 Apr 2010 (20100427/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2010
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2010

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the first quarter of 2010.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l11
L12 1 L11

=> d l12 ti abs bib

L12 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunogenic conjugates obtained by reductive amination of capsular polysaccharide of serotype 5 Pneumococcus
AB The invention provides conjugates obtained from reductive amination of Pneumococcus serotype 5 capsular polysaccharide. The conditions for the reductive amination are distinguished from the traditional conditions in that they make it possible to avoid the appearance of an undesirable compound which harmful to the immunogenicity of the conjugates. In carbon NMR, this undesirable compound is characterized by a resonance signal between 13 and 14 ppm. Aminated polysaccharides used in the manufacture of conjugates thus have a carbon NMR spectrum not having a resonance signal between 13 and 14 ppm. The conditions of reductive amination offered by the invention are two. According to a first process, the reductive amination is carried out at a slightly acidic pH (4-6.5) for at most 4 h. According to a second process, the polysaccharide is first reduced, then fragmented, and finally subjected to reductive amination itself, under traditional conditions or not. According to the process used, the structure of the aminated polysaccharide can vary, but these variations are without effect on immunogenicity.

```
AN   2004:591907  HCAPLUS <<LOGINID::20100428>>
DN   141:139132
TI   Immunogenic conjugates obtained by reductive amination of capsular
     polysaccharide of serotype 5 Pneumococcus
IN   Mistretta, Noelle; Danve, Emilie; Moreau, Monique
PA   Aventis Pasteur, Fr.
SO   Fr. Demande, 40 pp.
     CODEN: FRXXBL
DT   Patent
LA   French
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    -------------------    --------
PI   FR 2850106          A1     20040723    FR 2003-488            20030117
     FR 2850106          B1     20050225
     US 20040170638      A1     20040902    US 2004-758142         20040115
     AU 2004207647       A1     20040812    AU 2004-207647         20040116
     CA 2512847          A1     20040812    CA 2004-2512847        20040116
     WO 2004067574       A1     20040812    WO 2004-FR89           20040116
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI
     EP 1590373          A1     20051102    EP 2004-702733         20040116
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     BR 2004006819       A      20051227    BR 2004-6819           20040116
     NZ 541254           A      20080731    NZ 2004-541254         20040116
PRAI FR 2003-488         A      20030117
     US 2003-442154P     P      20030122
     WO 2004-FR89        W      20040116
RE.CNT  7     THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> d his

     (FILE 'HOME' ENTERED AT 16:20:53 ON 28 APR 2010)

     FILE 'HCAPLUS' ENTERED AT 16:21:07 ON 28 APR 2010
L1          3611 S PNEUMOCOCCUS
L2          3604 S CAPSULAR(W)(POLYSACCHARIDE OR OLIGOSACCHARIDE)
L3           236 S L1 AND L2
L4         26079 S QUINOVO? OR FUCO?
L5             4 S L3 AND L4
L6          6729 S REDUCTIVE AMINATION
L7             1 S L3 AND L6
L8             2 S L1 AND L6

     FILE 'REGISTRY' ENTERED AT 16:51:09 ON 28 APR 2010
L9                STRUCTURE UPLOADED
L10            0 S L9
L11            1 S L9 SSS FULL

     FILE 'HCAPLUS' ENTERED AT 16:52:20 ON 28 APR 2010
L12            1 S L11

=> loghold
LOGHOLD IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
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"HELP COMMANDS" at an arrow prompt (=>).

=> log hold
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     6.01     230.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -0.85      -6.80

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 16:52:30 ON 28 APR 2010

Connecting via Winsock to STN



Welcome to STN International!  Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 16:59:53 ON 28 APR 2010
FILE 'HCAPLUS' ENTERED AT 16:59:53 ON 28 APR 2010
COPYRIGHT (C) 2010 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     6.01     230.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -0.85      -6.80

=> s amination or conjugation or conjugate or borohydride or cyanoborohydride
         36058 AMINATION
         56970 CONJUGATION
         82437 CONJUGATE
         27563 BOROHYDRIDE
          2033 CYANOBOROHYDRIDE
L13     194606 AMINATION OR CONJUGATION OR CONJUGATE OR BOROHYDRIDE OR CYANOBOR
               OHYDRIDE

=> s l3 and l13
L14          44 L3 AND L13

=> s l14 and type(w)(5 or V)
       2174791 TYPE
       7317725 5
       1235348 V
         17660 TYPE(W)(5 OR V)
L15          0 L14 AND TYPE(W)(5 OR V)

=> s type(w)(5 or V)
       2174791 TYPE
       7317725 5
       1235348 V
L16      17660 TYPE(W)(5 OR V)
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=> s l14 and l16
L17          0 L14 AND L16

=> s v or 5
       1235348 V
       7317725 5
SYSTEM LIMITS EXCEEDED - SEARCH ENDED
The search profile you entered was too complex or gave too many
answers.  Simplify or subdivide the query and try again.  If you have
exceeded the answer limit, enter DELETE HISTORY at an arrow prompt
(=>) to remove all previous answers sets and begin at L1.  Use the
SAVE command to store any important profiles or answer sets before
using DELETE HISTORY.

=> s v
L18    1235348 V

=> s l14 and l18
L19          1 L14 AND L18

=> s 5
SYSTEM LIMITS EXCEEDED - SEARCH ENDED
The search profile you entered was too complex or gave too many
answers.  Simplify or subdivide the query and try again.  If you have
exceeded the answer limit, enter DELETE HISTORY at an arrow prompt
(=>) to remove all previous answers sets and begin at L1.  Use the
SAVE command to store any important profiles or answer sets before
using DELETE HISTORY.

=> s l14 and (PY<2003 or AY<2003 or PRY<2003)
      22998757 PY<2003
       4530678 AY<2003
       4001166 PRY<2003
L20         26 L14 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l20 1-26 ti abs bib

L20  ANSWER 1 OF 26  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Treatment and prevention of pneumococcal infection
AB   The authors disclose polysaccharide-polypeptide conjugates and expression
     vectors for treating or preventing pneumococcal infection.  In one
     example, the polysaccharide-polypeptide conjugate is composed of
     a C-terminal truncate of pneumolysin and capsular
     polysaccharide of type 19A pneumococcus.  In a second
     example, the authors disclose the immune response to genetic immunization
     with pneumolysin.  The compns. can be used prophylactically to vaccinate
     an individual and/or therapeutically to induce a therapeutic immune
     response in an infected individual.
AN   2004:430705  HCAPLUS <<LOGINID::20100428>>
DN   141:22192
TI   Treatment and prevention of pneumococcal infection
IN   Chen, Michael C.; Chiou, Chuang-Jiun; Li, Zhongming; Chen, Dong-Sheng
PA   Synergy America, Inc., USA
SO   PCT Int. Appl., 69 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2004043376        A2    20040527    WO 2003-US35529        20031106 <--
     WO 2004043376        A3    20041014
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             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
             GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
             OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
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             ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     CA 2504938           A1    20040527    CA 2003-2504938        20031106 <--
     AU 2003291365        A1    20040603    AU 2003-291365         20031106 <--
     AU 2003291365        B2    20090611
     US 20040213803       A1    20041028    US 2003-702305         20031106 <--
     US 7217791           B2    20070515
     EP 1558280           A2    20050803    EP 2003-768757         20031106 <--
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     CN 1711105           A     20051221    CN 2003-80102758       20031106 <--
     CN 100443116         C     20081217
     JP 2006506989        T     20060302    JP 2004-551863         20031106 <--
     TW 315986            B     20091021    TW 2003-92131025       20031106 <--
     US 20080199952       A1    20080821    US 2007-748270         20070514 <--
     US 7585669           B2    20090908
     JP 2010057501        A     20100318    JP 2009-253536         20091104 <--
PRAI US 2002-424497P      P     20021107  <--
     JP 2004-551863       A3    20031106
     US 2003-702305       A3    20031106
     WO 2003-US35529      W     20031106
OSC.G  1     THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT 3     THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20  ANSWER 2 OF 26  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Maternal pneumococcal conjugate immunization protects infant
     chinchillas in the pneumococcal otitis media model
AB   Infant immunization with pneumococcal polysaccharide-protein
     conjugate vaccines (PCVs) is unlikely to elicit protective serum
     antibody concns. during the first 4-6 mo of life, when recurrent
     pneumococcal otitis media (POM) often begins.  We therefore investigated a
     maternal pneumococcal immunization strategy to prevent early infant POM.
     Pregnant chinchillas (dams) received injections of heptavalent PCV or
     saline.  Post-partum maternal and infant (kits) blood samples were
     obtained, and kits were subsequently challenged by intranasal inoculation
     of a vaccine-type pneumococcal strain (19F).  Anti-pneumococcal
     capsular polysaccharide IgG antibody (Ab) concentration was
     measured using an ELISA in maternal and kit serum samples.  Immunized dams
     and their kits had significantly higher Ab titers than control dams and
     their kits.  Antibody titer in kits declined with a half-life of 12 days.
     Maternal immunization significantly reduced both the incidence (p = 0.05)
     and severity (p < 0.01) of exptl. POM in chinchilla kits, and was 82%
     effective at preventing mortality from invasive pneumococcal disease.
     Pre-challenge serum Ab concentration in kits was the single best predictor of
POM
     severity (r= -0.66).  This experiment strongly supports the hypothesis that
     maternal immunization with PCV will reduce the burden of early infant POM
     and invasive pneumococcal disease.
AN   2002:557944  HCAPLUS <<LOGINID::20100428>>
DN   137:323885
```

TI Maternal pneumococcal conjugate immunization protects infant chinchillas in the pneumococcal otitis media model
AU Hajek, David M.; Quartey, Moses; Giebink, G. Scott
CS Otitis Media Research Center and the Departments of Pediatrics and Otolaryngology, University of Minnesota School of Medicine, Minneapolis, MN, USA
SO Acta Oto-Laryngologica (2002), 122(3), 262-269
CODEN: AOLAAJ; ISSN: 0001-6489
PB Taylor & Francis
DT Journal
LA English
OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Vaccines against polysaccharide antigens
AB A review. Encapsulated bacteria such as Streptococcus pneumoniae, Neisseria meningitidis, and Haemophilus influenzae serogroup B (Hib) are a major cause of disease worldwide. Vaccine development against these organisms has targeted their capsular polysaccharides (CPS), as anti-capsular antibodies often protect against disease. The capsular polysaccharide vaccines that have been available against these organisms are neither immunogenic nor protective in young children and certain immunocompromised individuals. In general, polysaccharide (PS) antigens elicit a T-independent immune response, characterized by lack of memory, and poor immunogenicity at the extremes of life. Efforts to overcome the poor immunogenicity of CPS vaccines have led to development of conjugate vaccines. By conjugating CPS to carrier proteins it is possible to induce a T-dependent immune response against these antigens. Although conjugate vaccines have been successful against Hib disease, their applicability to multi-serotype/serogroup pathogens like the pneumococcus or the meningococcus is questioned. As a result, alternative vaccines including (1) surface proteins conserved across serotypes/serogroups, (2) peptides that mimic PS antigens and (3) DNA vaccines are presently under investigation. This review will highlight the potential and limitations of both CPS and CPS-conjugate vaccines against encapsulated bacteria as well as alternative strategies against PS antigens.
AN 2002:33846 HCAPLUS <<LOGINID::20100428>>
DN 136:215041
TI Vaccines against polysaccharide antigens
AU Lesinski, Gregory B.; Westerink, M. A. Julie
CS Department of Pathology, Medical College of Ohio, Toledo, OH, 43614, USA
SO Current Drug Targets: Infectious Disorders (2001), 1(3), 325-334
CODEN: CDTIAS; ISSN: 1568-0053
PB Bentham Science Publishers Ltd.
DT Journal; General Review
LA English
OSC.G 31 THERE ARE 31 CAPLUS RECORDS THAT CITE THIS RECORD (31 CITINGS)
RE.CNT 134 THERE ARE 134 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Are the enzyme immunoassays for antibodies to pneumococcal capsular polysaccharides serotype specific?
AB The specificity of antibody binding to pneumococcal capsular polysaccharides (Pnc PSs) measured by enzyme immunoassay (EIA) was studied by inhibition of antibody binding by homologous and heterologous PSs. The authors found extensive cross-reactivity of antibody binding to type 6B, 19F, and 23F PSs but not to type 14 PS, even after treatment with cell

wall PS (CPS). The cross-reactive antibody was highly prevalent in sera of infants and adults with naturally acquired antibody, but not in sera of infants and adults immunized with pneumococcal vaccines. However, a type 11A antibody response was seen after vaccination with heterologous PSs. Monoclonal antibodies prepared against a type 6B PS-tetanus toxoid conjugate recognized also other than the specific type of PS in the EIA, implying the possible existence of a cross-reactive epitope. Remarkable differences in specificity among type 6B PS prepns. from different manufacturers were found. Moreover, different lots of type 11A PS from the same manufacturer showed differences in specificity. The results suggest that some Pnc PS prepns. may contain cross-reactive epitopes or impurities, other than CPS, that are common to many types of Pnc PS. The specificity of antibodies, especially in sera from nonimmunized subjects, measured by EIA can be questioned.

AN 2000:371117 HCAPLUS <<LOGINID::20100428>>
DN 134:28305
TI Are the enzyme immunoassays for antibodies to pneumococcal capsular polysaccharides serotype specific?
AU Soininen, Anu; Van den Dobbelsteen, Germie; Oomen, Lukas; Kayhty, Helena
CS Department of Vaccines, National Public Health Institute (KTL), Helsinki, 00300, Finland
SO Clinical and Diagnostic Laboratory Immunology (2000), 7(3), 468-476
CODEN: CDIMEN; ISSN: 1071-412X
PB American Society for Microbiology
DT Journal
LA English
OSC.G 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunogenetic analysis of the immune response to pneumococcal polysaccharide
AB Pneumococcal serotype-specific anti-capsular polysaccharide antibodies protect against invasive pneumococcal disease. Within an individual the diversity of these antibodies is limited. To evaluate the repertoire of antibodies to pneumococcus and determine whether oligoclonality is seen both between serotypes and between individuals, the authors sampled the B cell repertoire induced by polysaccharide and conjugate vaccine in adult volunteers. Fifteen hybridomas secreting pneumococcus-specific monoclonal antibodies were generated from five volunteers. Ten were isotype switched, six were IgG2 and four were IgA. These included two isotype switch variants of the same clone. VH3 and VK2 were used by 10/15 and 7/13 of the sequenced clones, resp., with identical genes, VH3-48 and VK2-A17 used by a number of volunteers to a variety of serotypes. VDJ junctional characteristics and complementarity-determining region (CDR) 3 length were variable. High levels of somatic mutation in CDR1 and 2, inconsistent with a primary response, were found in 10/11 of the isotype-switched antibodies, including those induced by plain polysaccharide antigens. These data suggest that wild-type infection or nasopharyngeal carriage of Streptococcus pneumoniae in adults may induce memory and the response to subsequent immunization with plain polysaccharide or conjugate pneumococcal vaccines may have the characteristics of a secondary response.
AN 2000:271127 HCAPLUS <<LOGINID::20100428>>
DN 133:41882
TI Immunogenetic analysis of the immune response to pneumococcal polysaccharide

AU Baxendale, Helen E.; Davis, Zadie; White, Harry N.; Spellerberg, Myfanwy B.; Stevenson, Freda K.; Goldblatt, David
CS Immunobiology Unit, Institute of Child Health, University College London, London, UK
SO European Journal of Immunology (2000), 30(4), 1214-1223
CODEN: EJIMAF; ISSN: 0014-2980
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
OSC.G 35 THERE ARE 35 CAPLUS RECORDS THAT CITE THIS RECORD (35 CITINGS)
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Preparation of pneumococcal capsular polysaccharide -protein conjugate vaccines utilizing new fragmentation and conjugation technologies
AB There is a global urgent need for a new efficient and inexpensive vaccine to combat pneumococcal disease, which should also be affordable in developing countries. In view of this need a simple low-cost technique to prepare such a vaccine was developed. The preparation of serotype 14 and 23F pneumococcal capsular polysaccharide (PnPS)-protein conjugates to be included in a forthcoming multivalent PnPS conjugate vaccine is described. Com. lots of PnPSs produced according to Good Manufacturing practice from Streptococcus pneumoniae serotype 14 (PS14) and 23F (PS23F) were partially depolymd. by sonication or irradiation in an electron beam accelerator. The PnPS fragments were conjugated to tetanus toxoid (TT) using a recently developed conjugation chemical The application of these new simple, efficient and inexpensive fragmentation and conjugation technologies allowed the synthesis of several PnPS-protein conjugates containing PnPS fragments of preselected sizes and differing in the degree of substitution. The PS14TT and PS23FTT conjugate vaccine candidates were characterized chemical and their immunogenicity was evaluated in rabbits and mice. All PnPS conjugate vaccines, unlike the corresponding plain polysaccharides, produced high IgG titers in both animal species. The PS14TT conjugates tended to be more immunogenic than the PS23FTT conjugates. The immune response to the PS14TT conjugates, but not to the PS23FTT conjugates, was related to the size of the conjugated polysaccharide hapten. Both types of conjugates elicited strong booster effects upon secondary immunizations, resulting in high IgG1, IgG2a and IgG2b titers.
AN 2000:251663 HCAPLUS <<LOGINID::20100428>>
DN 133:251014
TI Preparation of pneumococcal capsular polysaccharide -protein conjugate vaccines utilizing new fragmentation and conjugation technologies
AU Pawlowski, Andrzej; Kallenius, Gunilla; Svenson, Stefan B.
CS Swedish Institute for Infectious Disease Control, Solna, SE-17182, Swed.
SO Vaccine (2000), 18(18), 1873-1885
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier Science Ltd.
DT Journal
LA English
OSC.G 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
RE.CNT 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI A brief history of pneumococcal vaccines
AB A review with 60 refs. Attempts to control pneumococcal infection by

vaccination, undertaken initially in 1911, have gone through 3 phases during the subsequent 8 decades. Initially, vaccines of killed pneumococcal cells prepared in a variety of ways were used in epidemic settings with inconclusive results, although administered to approx. 1 million recipients. The discovery that adults injected with small amts. of purified capsular polysaccharide developed antibodies to the homologous capsular type led to the trial of a tetravalent vaccine that showed conclusively its ability to prevent infection by the types represented in it. With the advent of penicillin and other effective antipneumococcal drugs, interest in prophylaxis waned. Interest in vaccination was revived only after demonstration that some segments of the population remained at high risk of death if infected and after the emergence of multidrug-resistant pneumococci. Infants and young children, among whom the incidence of pneumococcal infection is high, respond poorly to purified bacterial polysaccharides but develop satisfactory responses to bacterial polysaccharides when these are linked chemical to a protein. The early results of trials with such polysaccharide protein conjugate vaccines give promise that control of a significant portion of pneumococcal infection in the pediatric population will soon be feasible.

AN 2000:90359 HCAPLUS <<LOGINID::20100428>>
DN 132:136102
TI A brief history of pneumococcal vaccines
AU Austrian, Robert
CS Department of Molecular and Cellular Engineering, The University of Pennsylvania School of Medicine, Philadelphia, PA, USA
SO Drugs & Aging (1999), 15(Suppl. 1), 1-10
CODEN: DRAGE6; ISSN: 1170-229X
PB Adis International Ltd.
DT Journal; General Review
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Pneumococcal polysaccharide conjugate with cholera toxin B subunit for use in vaccines
AB A microencapsulated Streptococcus pneumoniae capsular polysaccharide conjugate with cholera toxin B subunit is prepared for protection against pneumococcal respiratory infections such as meningitis, otitis media, bacteremia, and acute exacerbations of chronic bronchitis, sinusitis, arthritis, or conjunctivitis. The capsular polysaccharide from an S. pneumoniae serotype is dissolved in deionized water, activated with CNBr , coupled with a spacer mol. (e.g. 6-aminocaproic acid, poly-L-aspartic acid), adding cholera toxin B subunit and then slowly adding 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide, stopping the reaction, centrifuging the crude conjugate, dialyzing, and removing unreacted proteins. This solution may be used for intranasal administration, or may be microencapsulated in alginate microspheres 0.1-5 μm in size for use in oral formulations. These microspheres are taken up by the Peyer's patches and transported through the efferent lymphatics.
AN 1998:548485 HCAPLUS <<LOGINID::20100428>>
DN 129:153264
OREF 129:31123a,31126a
TI Pneumococcal polysaccharide conjugate with cholera toxin B subunit for use in vaccines
IN Jeong, Seo Young; Kwon, Ick-Chan; Kim, Yong-Hee; Seong, Seung-Yong
PA Korea Institute of Science and Technology, S. Korea
SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9833521 | A1 | 19980806 | WO 1998-KR7 | 19980117 <-- |
| W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9856812 | A | 19980825 | AU 1998-56812 | 19980117 <-- |
| PRAI KR 1997-3021 | A | 19970131 | <-- | |
| WO 1998-KR7 | W | 19980117 | <-- | |

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Pneumococcal polysaccharide-meningococcal outer membrane protein complex conjugate vaccine is immunogenic in infants and children
AB Sixty-two infants and 31 toddlers were vaccinated with the tetravalent pneumococcal conjugate vaccine PncOMPC consisting of the capsular polysaccharide of pneumococcal types 6B, 14, 19F, and 23F conjugated to the outer membrane protein complex of Neisseria meningitidis. Infants were vaccinated at 2, 4, and 6 mo (group A) or at 4, 6, and 14 mo (group B); toddlers were vaccinated at 24 or at 24 and 26 mo of age. The IgG responses to the four pneumococcal polysaccharide types were measured by EIA. In infants, types 14 and 19F induced a significant response after the first dose and types 6B and 23F after the second dose. A clearcut booster response was seen to the booster dose given at 14 mo, indicating immunol. priming by the primary series at 2-6 mo of age. The responses of the toddlers to one or two doses of the vaccine were very similar to the responses in infants.
AN 1996:2781 HCAPLUS <<LOGINID::20100428>>
DN 124:142986
OREF 124:26571a,26574a
TI Pneumococcal polysaccharide-meningococcal outer membrane protein complex conjugate vaccine is immunogenic in infants and children
AU Kayhty, Helena; Ahman, Heidi; Ronnberg, Pirjo-Riitta; Tillikainen, Risto; Eskola, Juhani
CS National Public Health Institute, Helsinki, FIN-00300, Finland
SO Journal of Infectious Diseases (1995), 172(5), 1273-8
CODEN: JIDIAQ; ISSN: 0022-1899
PB University of Chicago Press
DT Journal
LA English
OSC.G 86 THERE ARE 86 CAPLUS RECORDS THAT CITE THIS RECORD (86 CITINGS)

L20 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Capsular polysaccharide and conjugate vaccines
AB A review with 27 refs. discussing vaccines for the pneumococcus, the meningococcus, and H. influenzae.
AN 1995:267814 HCAPLUS <<LOGINID::20100428>>
DN 122:53355
OREF 122:10337a,10340a

TI Capsular polysaccharide and conjugate vaccines
AU Makela, P. Helena
CS National Public Health Institute, Helsinki, FIN-00300, Finland
SO Zentralblatt fuer Bakteriologie (1994), 281(3), 334-9
CODEN: ZEBAE8; ISSN: 0934-8840
DT Journal; General Review
LA English
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L20 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Epitope specificity of rabbit IgG elicited by pneumococcal type 23F synthetic oligosaccharide- and native polysaccharide-protein conjugate vaccines: comparison with human anti-polysaccharide 23F IgG
AB Streptococcus pneumoniae type 23F capsular polysaccharide (PS23F) consists of a repeating glycerol-phosphorylated branched tetrasaccharide. The immunogenicities of the following related antigens were investigated: (1) a synthetic trisaccharide comprising the backbone of one repeating unit, (2) a synthetic tetrasaccharide comprising the complete repeating unit, and (3) native PS23F [all 3 conjugated to keyhole limpet hemocyanin (KLH)], and (4) formalin-killed S. pneumoniae 23F. All antigens except the trisaccharide-KLH conjugate induced relatively high anti-PS23F antibody levels in rabbits. The epitope specificity of such antibodies was then studied by an inhibition immunoassay. The α(1→2)-linked L-rhamnose branch was shown to be immunodominant for IgG induced by tetrasaccharide-KLH, PS23F-KLH, and killed S. pneumoniae 23F: in most sera L-rhamnose totally inhibited the binding of IgG to PS23F. Thus, there appears to be no major difference in epitope specificity between IgG induced by tetrasaccharide-KLH and that induced by antigens containing the polymeric form of PS23F. Human anti-PS23F IgG (either vaccine induced or naturally acquired) had a different epitope specificity: none of the inhibitors used, including L-rhamnose and tetrasaccharide-KLH, exhibited substantial inhibition. Apparently, the epitope recognized by human IgG on PS23F is larger than the epitope recognized by rabbit IgG. Both human and rabbit antisera efficiently opsonized type 23F pneumococci, as measured in a phagocytosis assay using human polymorphonuclear leukocytes.
AN 1994:241983 HCAPLUS <<LOGINID::20100428>>
DN 120:241983
OREF 120:42841a,42844a
TI Epitope specificity of rabbit IgG elicited by pneumococcal type 23F synthetic oligosaccharide- and native polysaccharide-protein conjugate vaccines: comparison with human anti-polysaccharide 23F IgG
AU Alonso de Velasco, E.; Verheul, A. F. M.; van Steijn, A. M. P.; Dekker, H. A. T.; Feldman, R. G.; Fernandez, I. M.; Kamerling, J. P.; Vliegenthart, J. F. G.; Verhoef, J.; Snippe, H.
CS Eijkman-Winkler Lab. med. Microbiol., Utrecht Univ., Utrecht, 3584 CX, Neth.
SO Infection and Immunity (1994), 62(3), 799-808
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

L20 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Detoxified Ra-LPS prevents suppression by free capsular polysaccharide of the immune response toward a polysaccharide-protein conjugate

AB The immunogenicity of a conjugate vaccine consisting of pneumococcal type 14 capsular polysaccharide (S14PS) and bovine serum albumin (BSA) in an oil-in-water emulsion containing the nonionic block polymer L180.5 was studied in mice. The S14PS-BSA conjugate in this adjuvant formulation predominantly induced IgG1 antibodies. The variability of the immune response in individual mice increased with a higher conjugate dose. The presence of free capsular polysaccharide within polysaccharide-protein conjugate prepns. might suppress the immune response toward the conjugate. To mimic the presence of free capsular polysaccharide within the conjugate, increasing amts. of free S14PS were mixed with an optimal dose of the conjugate and the immunogenicity of these mixts. was investigated. High doses of free S14PS suppressed the immune response toward the conjugate and all IgG isotypes were affected. Addition of the immune modulator detoxified Ra-LPS not only shifted the IgG isotype distribution from mainly IgG1 toward the complement-activating subclasses IgG2a, IgG2b, and IgG3, but also prevented the suppression induced by free S14PS. The results suggest that detoxified Ra-LPS is an appropriate adjuvant for use in polysaccharide-protein conjugate vaccines.
AN 1994:161053 HCAPLUS <<LOGINID::20100428>>
DN 120:161053
OREF 120:28345a,28348a
TI Detoxified Ra-LPS prevents suppression by free capsular polysaccharide of the immune response toward a polysaccharide-protein conjugate
AU Ten Hagen, Timo L.M.; Verheul, Andre F.M.; Snippe, Harm; Hunter, Robert L.
CS Eijkman-Winkler Lab. of Med. Microbiol., Utrecht Univ., Utrecht, 3584 CX, Neth.
SO Vaccine Research (1993), 2(3), 215-25
CODEN: VAREES; ISSN: 1056-7909
DT Journal
LA English

L20 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Induction of anti-pneumococcal cell wall polysaccharide antibodies by type 4 pneumococcal polysaccharide-protein conjugates
AB The authors have prepared polysaccharide-protein conjugates consisting of type 4 pneumococcal capsular polysaccharide (PS4) coupled to tetanus toxoid. The PS4 preparation used contained 2.5% pneumococcal cell wall polysaccharide (CPs). During the conjugation process, in addition to PS4-protein conjugates, CPs-protein conjugates were also formed. After immunization with PS4-protein conjugates, CPs-protein conjugates that are present as a contaminant induce IgG anti-CPs antibodies in mice. Pneumococcal oligosaccharides, prepared by periodate oxidation of PS4, did not contain detectable amts. of CPs; hence, oligosaccharide-protein conjugates did not induce anti-CPs antibodies.
AN 1993:57724 HCAPLUS <<LOGINID::20100428>>
DN 118:57724
OREF 118:10312h,10313a
TI Induction of anti-pneumococcal cell wall polysaccharide antibodies by type 4 pneumococcal polysaccharide-protein conjugates
AU Peeters, Carla; Tenbergen-Meekes, Anne Marie; Poolmann, Jan; Zegers, Ben; Rijkers, Ger
CS Dep. Immunol., Univ. Hosp. Children, Utrecht, Neth.
SO Medical Microbiology and Immunology (1992), 181(1), 35-42
CODEN: MMIYAO; ISSN: 0300-8584
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L20 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Synthesis of a conjugate vaccine composed of pneumococcus type 14 capsular polysaccharide bound to pertussis toxin
AB Type 14 is one of the common types isolated from patients of all ages with infections caused by Streptococcus pneumoniae. Its capsular polysaccharide (Pn14) is composed of a neutrally charged tetrasaccharide repeat unit. Pn14 does not elicit protective levels of antibodies in infants and children and is a less than optimal immunogen of the 23-valent vaccine for adults. Pertussis toxin (PT) is both a virulence factor and protective antigen of Bordetella pertussis: it is not soluble at neutral pH and forms insol. complexes with acidic polysaccharides. Both Pn14 and PT are potential components of vaccines for infants and children. Accordingly, a synthetic scheme was devised to prepare a conjugate of Pn14 and PT. An adipic acid hydrazide derivative of Pn14 was bound to PT at pH 3.9 by carbodiimide-mediated condensation. The conjugation procedure inactivated the PT as assayed by CHO cell and histamine-sensitizing activity. The Pn14-PT conjugate elicited antibodies in mice to Pn14 at levels estimated to be protective in humans and elicited neutralizing antibodies to PT.
AN 1993:37207 HCAPLUS <<LOGINID::20100428>>
DN 118:37207
OREF 118:6759a,6762a
TI Synthesis of a conjugate vaccine composed of pneumococcus type 14 capsular polysaccharide bound to pertussis toxin
AU Schneerson, Rachel; Levi, Lily; Robbins, John B.; Bryla, Dolores M.; Schiffman, Gerald; Lagergard, Teresa
CS Lab. Dev. Mol. Immun., Natl. Inst. Child Health Hum. Dev., Bethesda, MD, 20892, USA
SO Infection and Immunity (1992), 60(9), 3528-32
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L20 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Enzyme immunoassay for detection of immunoglobulin G (IgG), IgM, and IgA antibodies against type 6B pneumococcal capsular polysaccharide and cell wall C polysaccharide in chinchilla serum
AB Conjugation of the capsular polysaccharides of Streptococcus pneumoniae to protein carriers has introduced a new generation of pneumococcal vaccines which may be efficacious in preventing pneumococcal otitis media during infancy. The chinchilla model has been used extensively for studying the pathogenesis of pneumococcal otitis media and for testing the efficacy of early pneumococcal capsular polysaccharide (PCP) vaccines, but immunol. studies in the chinchilla have been limited by the lack of antibodies against specific Ig isotypes. By using affinity-purified rabbit IgG anti-chinchilla IgG, IgM, and IgA, a sensitive enzyme immunoassay was developed that is highly specific for IgG, IgM and IgA antibodies against type 6B PCP (anti-6B) and against C polysaccharide in chinchilla serum. Antibody titers increased in serum from 5 chinchillas immunized with a type 6B outer membrane protein complex vaccine. Increases of anti-6B IgG and IgM antibody titers were more striking than were increases of anti-6B IgA or anti-C polysaccharide IgG, IgM, or IgA titers.
AN 1992:446123 HCAPLUS <<LOGINID::20100428>>
DN 117:46123
OREF 117:8183a,8186a
TI Enzyme immunoassay for detection of immunoglobulin G (IgG), IgM, and IgA

antibodies against type 6B pneumococcal capsular
polysaccharide and cell wall C polysaccharide in chinchilla serum
AU Koskela, Markku; Harris, Michelle; Giebink, G. Scott
CS Sch. Med., Univ. Minnesota, Minneapolis, MN, 55455, USA
SO Journal of Clinical Microbiology (1992), 30(6), 1485-90
CODEN: JCMIDW; ISSN: 0095-1137
DT Journal
LA English
OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

L20 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Serum antibody response in adult volunteers elicited by injection of Streptococcus pneumoniae type 12F polysaccharide alone or conjugated to diphtheria toxoid
AB Conjugates of an uronic acid-containing capsular polysaccharide (CP), pneumococcus type 12F (Pn12F) bound to diphtheria toxoid (DT), were studied for safety and immunogenicity in adult volunteers. In mice, these conjugates, prepared with the same lot of DT and Pn12F-40234-006, a homogeneous CP of high mol. weight, or Pn12-812408, a polydisperse CP with lower-mol.-weight material, were more immunogenic than the Pn12F alone and had T-cell dependent properties (A. Fattom, et al, 1988). Adult volunteers, randomized into three groups, were injected either with one of these two conjugates or with Pnu-Imune, the 23 valent pneumococcus vaccine containing 25 μg of Pn12F as one of its components. Volunteers were injected two times, 4 wk apart, with the Pn12F-DT conjugates and once with the Pnu-Imune. Side reactions following injection of the conjugates or Pnu-Imune were mild and short-lived. At 4 wk and at 7 mo after the first injection, higher levels of Pn12F antibodies were found in the volunteers injected with the conjugates than in the Pnu-Imune group. The conjugate prepared with the higher-mol.-weight Pn12F elicited higher levels of antibodies than the conjugate prepared with a lower-mol.-weight Pn12F preparation Both conjugates elicited about a 13-fold rise in DT antibodies.
AN 1990:569946 HCAPLUS <<LOGINID::20100428>>
DN 113:169946
OREF 113:28811a,28814a
TI Serum antibody response in adult volunteers elicited by injection of Streptococcus pneumoniae type 12F polysaccharide alone or conjugated to diphtheria toxoid
AU Fattom, Ali; Lue, Cummins; Szu, Shousun C.; Mestecky, Jiri; Schiffman, Gerald; Bryla, Dolores; Vann, Willie F.; Watson, Douglas; Kimzey, Lorene M.; et al.
CS Lab. Dev. Mol. Immun., Natl. Inst. Child Health Hum. Dev., Bethesda, MD, 20892, USA
SO Infection and Immunity (1990), 58(7), 2309-12
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

L20 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Type 6 and 19 pneumococcal polysaccharides coupled to erythrocytes elicit pneumococcal cell wall-specific primary IgM responses and capsular polysaccharide-specific secondary IgG responses
AB Previous results have shown that the primary murine antibody responses to vaccine prepns. of type 6 (S6; Danish type 6A) or type 19 (S19; Danish type 19F) pneumococcal capsular polysaccharides consist entirely of IgM antipneumococcal cell wall carbohydrate (PnC)-specific antibodies. No capsular polysaccharide-specific IgM antibodies were detectable. In this report, antibodies specific for S6 and S19 capsular polysaccharides were induced in mice in secondary responses to chicken

erythrocyte (CRBC) conjugates of S6 and S19. Essentially all detectable IgG produced in the secondary response was capsular polysaccharide specific and included all subclasses of IgG. In contrast, all detectable IgM produced in the primary response to S6-CRBC and S19-CRBC, and the IgM produced in the secondary response to S6-CRBC was not capsular polysaccharide specific since it reacted with PnC. Thus, there is a major change in the specificity of the primary IgM response compared to the secondary IgG response. Injection of PnC or any PnC-containing polysaccharide prior to immunization with S6-CRBC or S19-CRBC suppressed the primary IgM response. Only the capsular polysaccharide used in the immunizing polysaccharide-erythrocyte conjugate suppressed induction of the capsular polysaccharide-specific secondary IgG response. These results suggest that S6 and S19 capsular polysaccharide -specific IgG-producing memory B cells derive from capsular polysaccharide-specific precursors which do not produce detectable antibody after primary immunization.

AN 1990:404315 HCAPLUS <<LOGINID::20100428>>
DN 113:4315
OREF 113:878h,879a
TI Type 6 and 19 pneumococcal polysaccharides coupled to erythrocytes elicit pneumococcal cell wall-specific primary IgM responses and capsular polysaccharide-specific secondary IgG responses
AU Milligan, Gregg N.; Fairchild, Robert L.; Sterner, Kay E.; Braley-Mullen, Helen
CS Sch. Med., Univ. Missouri, Columbia, MO, 65212, USA
SO European Journal of Immunology (1990), 20(3), 595-603
CODEN: EJIMAF; ISSN: 0014-2980
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L20 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Synthesis and immunological properties of conjugates composed of group B streptococcus type III capsular polysaccharide covalently bound to tetanus toxoid
AB A synthetic scheme for covalently binding group B streptococcus type III to tetanus toxoid (TT), using adipic acid dihydrazide as a spacer, is described. Type III alone or a conjugate with TT was injected s.c. into laboratory mice, and the type-specific and TT antibody responses elicited by these immunogens were assayed. Type III-TT elicited higher levels of type-specific antibodies after each immunization that did the type III alone. These levels were related to the dosage of the conjugate, enhanced by Freund adjuvant, and exhibited booster responses. Type III alone elicited only IgM antibodies in Swiss albino mice and mostly IgM and low levels of IgG antibodies of the IgG3 subclass in BALB/c mice. Type III-TT conjugates, in contrast, elicited mostly IgG antibodies in both strains of mice. IgA type III antibodies were not detected. The 1st two immunizations with the conjugates elicited type III antibodies in the IgG1 and in the IgG3 subclasses. Low levels of IgG2a type III antibodies were detected after a 3rd injection of type III-TT. Conjugate-induced antibodies facilitated opsonization of group B streptococcus type III organisms and did not react with the structurally related pneumococcus type 14. TT alone or as a component of type III-TT induced mostly antibodies of the IgG class; IgG1 levels were the highest of the 4 subclasses. No IgA TT antibodies were detected. The conjugation procedure, thus, enhanced the immunogenicity of and conferred T-cell dependent properties to the type III while preserving the immunogenicity of the TT component. The T-cell dependent properties of the conjugates were responsible for stimulating IgG type III antibodies which could be boosted.

AN 1990:176565 HCAPLUS <<LOGINID::20100428>>
DN 112:176565
OREF 112:29822h,29823a
TI Synthesis and immunological properties of conjugates composed of group B streptococcus type III capsular polysaccharide covalently bound to tetanus toxoid
AU Lagergard, Teresa; Shiloach, Joseph; Robbins, John B.; Schneerson, Rachel
CS Natl. Inst. Child Health Hum. Dev., Bethesda, MD, 20892, USA
SO Infection and Immunity (1990), 58(3), 687-94
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 29 THERE ARE 29 CAPLUS RECORDS THAT CITE THIS RECORD (29 CITINGS)

L20 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Modulation of the immune response to pneumococcal type 14 capsular polysaccharide-protein conjugates by the adjuvant Quil A depends on the properties of the conjugates
AB Streptococcus pneumoniae type 14 capsular polysaccharide -bovine serum albumin (S14PS-BSA) conjugates were prepared by water-soluble-carbodiimide-mediated condensation with or without the use of N-hydroxysulfosuccinimide. The immunogenicities of the capsular polysaccharide (S14PS) and of the conjugates were studied in (CBA/N + BALB/c)F1 mice and in female BALB/c mice. The response in these mice indicates that S14PS could be classified as a thymus-independent type 2 antigen. Coupling of S14PS to BSA improved the immunogenicity of this polysaccharide, and an IgG memory response was evoked. Conjugation with N-hydroxysulfosuccinimide resulted in a product with a higher polysaccharide/protein ratio. This conjugate induced a greater immune response than did the classical conjugate. Quil A enhanced the immune response to S14PS and to most S14PS-BSA conjugates. The enhancement of the immune response to the conjugates seemed to depend on the coupling procedure. Thus, for the construction of immunostimulating complexes based on polysaccharide or oligosaccharide-protein conjugates, attention should be paid to the degree of crosslinking of the antigens involved.
AN 1989:190638 HCAPLUS <<LOGINID::20100428>>
DN 110:190638
OREF 110:31611a,31614a
TI Modulation of the immune response to pneumococcal type 14 capsular polysaccharide-protein conjugates by the adjuvant Quil A depends on the properties of the conjugates
AU Verheul, A. F. M.; Versteeg, A. A.; De Reuver, M. J.; Jansze, M.; Snippe, H.
CS Dep. Immunol., Utrecht Univ., Utrecht, 3511 GG, Neth.
SO Infection and Immunity (1989), 57(4), 1078-83
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L20 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunochemical studies on pneumococcal type 37 capsular polysaccharide
AB Pneumococcal type 37 capsular polysaccharide was obtained free of contaminants by affinity chromatog. on Con-A, wheat germ agglutinin, Maclura pomifera lectin and HOPC-8 mouse myeloma protein affinity columns. The immunochem. reactivity of native and periodate oxidized borohydride reduced type 37 polysaccharide antigen with polyclonal rabbit and monoclonal mouse anti-Pn37 hybridoma antibodies was studied by quant. precipitation Quant. hapten inhibition studies, employing the

isomeric series of α- and β-(1→2), (1→3), (1→4) and (1→6)-linked glucobioses as competitive inhibitors of antibody precipitation establish a specificity for anti-Pn37 antibody directed at least in part, against the Glc β(1→2) Glc (sophorosyl) unit. A high mol. weight, D-glucose-containing polysaccharide antigen, cross-reactive with rabbit anti-Pn37 is reported which was found to occur in the culture medium of 7 of 19 of Actinomyces examined

AN 1989:133225 HCAPLUS <<LOGINID::20100428>>
DN 110:133225
OREF 110:21975a,21978a
TI Immunochemical studies on pneumococcal type 37 capsular polysaccharide
AU Allen, Peter Z.; Bowen, William H.
CS Sch. Med. Dent., Univ. Rochester, Rochester, NY, 14642, USA
SO Molecular Immunology (1988), 25(10), 1011-17
CODEN: MOIMD5; ISSN: 0161-5890
DT Journal
LA English
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L20 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Synthesis and physicochemical and immunological characterization of pneumococcus type 12F polysaccharide-diphtheria toxoid conjugates
AB A scheme for the synthesis and purification of conjugates, composed of the type 12F capsular polysaccharide of Streptococcus pneumoniae (Pn12F) and diphtheria toxoid, is described. Pn12F is a branched-chain copolymer composed of a hexasaccharide repeating unit containing an aminouronic acid, N-acetylmannoseaminouronic acid. Sulfhydryl groups were introduced into Pn12F by forming an amide bond between cystamine and carboxyl groups of N-acetylmannoseaminouronic acid in the presence of a carbodiimide. The disulfide moiety of cystamine was reduced to form the cysteamine derivative of Pn12F which was, in turn, covalently bound to diphtheria toxoid by using the heterobifunctional linker N-succinimidyl-3-(2-pyridylthio)propionate. Unbound, high-mol.-weight Pn12F was removed from the conjugate by hydrophobic interaction chromatog. through octyl Sepharose by using n-octyl-β-D-glucopyranoside as the eluent. In young outbred mice, Pn12F did not elicit detectable serum antibodies. Pn12F-diphtheria toxoid, in contrast, elicited antibodies after 2 injections and had T-cell-dependent properties as evidenced by a response to priming and by its ability to elicit booster responses. This scheme seems applicable to the synthesis of conjugates with other capsular polysaccharides containing aminouronic acids.
AN 1988:556035 HCAPLUS <<LOGINID::20100428>>
DN 109:156035
OREF 109:25833a,25836a
TI Synthesis and physicochemical and immunological characterization of pneumococcus type 12F polysaccharide-diphtheria toxoid conjugates
AU Fattom, Ali; Vann, Willie F.; Szu, Shousun C.; Sutton, Ann; Li, Xiuru; Bryla, Dolores; Schiffman, Gerald; Robbins, John B.; Schneerson, Rachel
CS Lab. Dev. Mol. Immun., Natl. Inst. Child Health Hum. Dev., Bethesda, MD, 20892, USA
SO Infection and Immunity (1988), 56(9), 2292-8
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L20 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Quantitative and qualitative analyses of serum antibodies elicited in

adults by Haemophilus influenzae type b and pneumococcus type 6A capsular polysaccharide-tetanus toxoid conjugates

AB Covalent binding to immunogenic proteins increases the immunogenicity of the capsular polysaccharides of Haemophilus influenzae type b (Hib) and pneumococcus type 6A (Pn6A). Conjugates composed of Hib, Pn6A, or the cross-reacting Escherichia coli K100 covalently bound to tetanus toxoid (TT) were injected into young adult volunteers. Local reactions were common and were probably due to Arthus reactivity mediated by the preexisting antibodies reacting with the TT component of the conjugates. Fever occurred in .apprx.10% of the volunteers after the first injection; no volunteers had fever after the second injection. Similar levels of Hib or Pn6A antibodies were elicited by either 50- or 100-μg doses or by concurrent injection of 2 different conjugates (Hib-TT and Pn6A-TT or Hib-TT and K100-TT). The Hib-TT elicited about a 180-fold increase in Hib antibodies, and the Pn6A-TT conjugate elicited about an 8-fold increase in Pn6A antibodies after 1 injection. Booster reactions were not elicited in adults; similar levels of antibodies in the 5 exptl. groups suggested that the responses elicited by the conjugates were maximal. A 1-way cross-reaction was noted as Pn6A conjugates elicited rises of Hib antibodies in 13 of 20 volunteers; only 4 of 59 volunteers immunized with Hib-TT had increases in Pn6A antibodies. The preimmunization Hib antibodies were composed of IgM, IgA, and IgG. The postimmunization sera showed an increase in all 3 isotypes; the elevation of the IgG was the highest of the 3 isotypes. Conjugate-induced antibodies to both the polysaccharide and TT exerted biol. activities that have been correlated with immunity. Adsorption of the Hib-TT onto Al hydroxide resulted in higher levels and an earlier Hib antibody response in infant rhesus. These results encourage the evaluation of Hib and Pn6A conjugates in human children and infants.

AN 1986:223162 HCAPLUS <<LOGINID::20100428>>

DN 104:223162

OREF 104:35373a,35376a

TI Quantitative and qualitative analyses of serum antibodies elicited in adults by Haemophilus influenzae type b and pneumococcus type 6A capsular polysaccharide-tetanus toxoid conjugates

AU Schneerson, Rachel; Robbins, John B.; Parke, James C., Jr.; Bell, Clara; Schlesselman, James J.; Sutton, Ann; Wang, Zhen; Schiffman, Gerald; Karpas, Arthur; Shiloach, Joseph

CS Lab. Dev. Mol. Immunity, Natl. Inst. Child Health Human Dev., Bethesda, MD, 20892, USA

SO Infection and Immunity (1986), 52(2), 519-28
CODEN: INFIBR; ISSN: 0019-9567

DT Journal

LA English

OSC.G 39 THERE ARE 39 CAPLUS RECORDS THAT CITE THIS RECORD (39 CITINGS)

L20 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN

TI Specific antibodies to diphtheria toxin and type 6A pneumococcal capsular polysaccharide induced by a model of semi-synthetic glycoconjugate antigen

AB A mol. model of a carbohydrate-protein conjugate is described, involving the non-toxic mutant protein CRM197, serol. related to the diphtheria toxin, covalently bound to a characterized oligosaccharide derived from the mol. structure of type 6A pneumococcal capsular polysaccharide. Physicochem. and immunochem. characteristics of this oligosaccharide-protein conjugate were consistent with a mol. showing a molar carbohydrate/protein ratio of 8, an average mol. weight of 75,000, and retention of complete immunochem. identity when tested towards the homologous antisera. The immunol. characteristics obtained after immunization of 2 animal models showed a high immunogenicity of the glycoconjugate specifically directed towards diphtheria toxin and the type

6A pneumococcal capsular polysaccharide.
AN 1985:503124 HCAPLUS <<LOGINID::20100428>>
DN 103:103124
OREF 103:16509a,16512a
TI Specific antibodies to diphtheria toxin and type 6A pneumococcal capsular polysaccharide induced by a model of semi-synthetic glycoconjugate antigen
AU Porro, M.; Costantino, P.; Viti, S.; Vannozzi, F.; Naggi, A.; Torri, G.
CS Res. Dev. Biopharm., Sclavo S.p.A., Siena, 53100, Italy
SO Molecular Immunology (1985), 22(8), 907-19
CODEN: MOIMD5; ISSN: 0161-5890
DT Journal
LA English
OSC.G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

L20 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Serum antibody responses of juvenile and infant rhesus monkeys injected with Haemophilus influenzae type b and pneumococcus type 6A capsular polysaccharide-protein conjugates
AB Juvenile and infant rhesus monkeys were injected s.c. with saline solns. of Haemophilus influenzae type b (Hib) and pneumococcus type 6A (Pn6A) capsular polysaccharides conjugated to either tetanus toxoid (TT), horseshoe crab hemocyanin, or cholera toxin (CT), and the antibody responses of the monkeys to both bacterial components were measured. All three Hib conjugates were immunogenic and elicited booster responses; their comparative immunogenicity was Hib-CT > Hib-TT > Hib-horseshoe crab hemocyanin. Hib alone did not elicit antibodies in the juveniles. Juveniles responded earlier and with higher levels of antibodies than did infants. TT, as well as diphtheria-tetanus toxoid-pertussis vaccine adsorbed, injected concurrently at a sep. site, increased both Hib and TT antibody responses in juveniles ($P < 0.05$). Concurrent injection of 5 Lf of fluid TT with a nonimmunogenic 5-μg dose of Hib-TT in infants elicited levels of Hib antibodies comparable to those elicited by 50 μg of Hib-TT. Hib antibodies elicited by the conjugates remained at protective levels in both juveniles and infants 2 mo after the last injection, were bactericidal, and conferred passive immunity against bacteremia in infant rats. Passive immunization of juveniles with tetanus immune globulin before each injection of Hib-TT did not suppress Hib antibodies. Hib-TT and Hib-CT elicited increases of Hib antibodies of the IgM and G isotypes in the infants. The Pn6A-TT conjugate was considerably less immunogenic than the Hib-TT conjugate; only a few of the juveniles or infants responded with protective levels of Pn6A antibodies. Pn6A antibodies from responders conferred protection in mice against i.p. challenge with Pn6A organisms. TT antibodies were elicited in both juvenile and infant animals after one injection of 50 μg of Hib-TT and in the infants injected with 5 μg of Hib-TT plus 5 Lf of TT; 5 μg of Hib-TT and Pn6A-TT in combination alone did not elicit TT antibodies. Hib-CT elicited CT antibodies in both juveniles and infants.
AN 1984:549441 HCAPLUS <<LOGINID::20100428>>
DN 101:149441
OREF 101:22617a,22620a
TI Serum antibody responses of juvenile and infant rhesus monkeys injected with Haemophilus influenzae type b and pneumococcus type 6A capsular polysaccharide-protein conjugates
AU Schneerson, Rachel; Robbins, John B.; Chu, Chiayung; Sutton, Ann; Vann, Willie; Vickers, James C.; London, William T.; Curfman, Blanche; Hardegree, M. Carolyn; et al.
CS Lab. Dev. Mol. Immun., Natl. Inst. Child Health Hum. Dev., Bethesda, MD, 20205, USA
SO Infection and Immunity (1984), 45(3), 582-91
CODEN: INFIBR; ISSN: 0019-9567

DT Journal
LA English
OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)

L20 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Interaction of concanavalin A with the capsular polysaccharide of pneumococcus type XII and isolation of kojibiose from the polysaccharide
AB The disaccharide kojibiose (2-O-α-D-glucopyranosyl-D-glucose) was isolated from a partial acid hydrolyzate of the capsular polysaccharide of type XII pneumococcus. Acetolysis of the polysaccharide provided α-kojibiose octacetate. These findings confirmed several decades of immunochem. support for the presence of kojibiosyl residues in the type XII pneumococcal polysaccharide. A precipitin curve was generated when the jack bean lectin, concanavalin A, interacted with specific polysaccharide (SXII), but no precipitate formed with periodate oxidized, borohydride-reduced SXII. Since oxidation by periodate destroyed kojibiosyl residues and this oligosaccharide was a good inhibitor of the reaction of SXII with concanavalin A, it is probable that this disaccharide forms the basis for the interaction of SXII with concanavalin A.
AN 1974:130238 HCAPLUS <<LOGINID::20100428>>
DN 80:130238
OREF 80:20985a,20988a
TI Interaction of concanavalin A with the capsular polysaccharide of pneumococcus type XII and isolation of kojibiose from the polysaccharide
AU Goldstein, I. J.; Cifonelli, J. A.; Duke, Jodie
CS Dep. Biol. Chem., Univ. Michigan, Ann Arbor, MI, USA
SO Biochemistry (1974), 13(5), 867-70
CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English

L20 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunochemical studies on cross-reactions of antipneumococcal sera. V. Cross-reactions of horse antipneumococcal type II serum with Escherichia coli M-II polysaccharide, dextran, and hemocyanin-o-azophenyl-β-glucuronide
AB cf. CA 62: 5744e. A capsular polysaccharide of a mucoid strain of E. coli was found to cross-react with horse antiserum to the type-specific polysaccharide of pneumococcus type II. Glucuronic acid, which is present as terminal non-reducing residues in the side chains of both the pneumococcal and E. coli polysacchrides, is probably responsible for this cross-reactivity. The antiserum also cross-reacts with dextran; however, the antibody fraction precipitable by the E. coli polysaccharides is distinct from that removed by dextran. Inhibition of precipitation demonstrated that isomaltose is a much more efficient inhibitor than glucuronic acid of the dextran cross-reaction while the reverse is true of the cross-reaction with the E. coli polysaccharide. Keyhole limpet hemocyanine-o-azophenyl-β-glucuronide was capable of precipitating almost all of the antipneumococcal antibody, demonstrating a common immune specificity for glucuronyl residues and a pivotal role for glucuronic acid in the antigenic determinants of the pneumococcal polysaccharide. Heterogeneity of the antibody in this antiserum was also shown by the finding that the antibody fraction which cross-reacts with E. coli polysaccharide was preferentially absorbed by the hemocyanin conjugate prior to removal of the fraction precipitable by dextran.

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AN   1967:420037  HCAPLUS <<LOGINID::20100428>>
DN   67:20037
OREF 67:3775a,3778a
TI   Immunochemical studies on cross-reactions of antipneumococcal sera.  V.
     Cross-reactions of horse antipneumococcal type II serum with Escherichia
     coli M-II polysaccharide, dextran, and
     hemocyanin-o-azophenyl-β-glucuronide
AU   Zolla, Susan; Goodman, Joel W.
CS   San Francisco Med. Center, Univ. of California, San Francisco, CA, USA
SO   Immunochemistry (1967), 4(3), 135-42
     CODEN: IMCHAZ; ISSN: 0019-2791
DT   Journal
LA   English
OSC.G   1     THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)


=> d his


     (FILE 'HOME' ENTERED AT 16:20:53 ON 28 APR 2010)

     FILE 'HCAPLUS' ENTERED AT 16:21:07 ON 28 APR 2010
L1          3611 S PNEUMOCOCCUS
L2          3604 S CAPSULAR(W)(POLYSACCHARIDE OR OLIGOSACCHARIDE)
L3           236 S L1 AND L2
L4         26079 S QUINOVO? OR FUCO?
L5             4 S L3 AND L4
L6          6729 S REDUCTIVE AMINATION
L7             1 S L3 AND L6
L8             2 S L1 AND L6

     FILE 'REGISTRY' ENTERED AT 16:51:09 ON 28 APR 2010
L9                STRUCTURE UPLOADED
L10            0 S L9
L11            1 S L9 SSS FULL

     FILE 'HCAPLUS' ENTERED AT 16:52:20 ON 28 APR 2010
L12            1 S L11
L13       194606 S AMINATION OR CONJUGATION OR CONJUGATE OR BOROHYDRIDE OR CYANO
L14           44 S L3 AND L13
L15            0 S L14 AND TYPE(W)(5 OR V)
L16        17660 S TYPE(W)(5 OR V)
L17            0 S L14 AND L16
L18      1235348 S V
L19            1 S L14 AND L18
L20           26 S L14 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> log hold

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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PASSWORD:
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FILE 'HCAPLUS' ENTERED AT 17:37:34 ON 28 APR 2010
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      95.34     320.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                     -22.95     -28.90

=> s reduction or reduced
        380641 REDUCTION
       1443870 REDUCED
L21    1751257 REDUCTION OR REDUCED

=> s l3 and l21
L22         19 L3 AND L21

=> s l22 and (PY<2003 or AY<2003 or PRY<2003)
      22998757 PY<2003
       4530678 AY<2003
       4001166 PRY<2003
L23         17 L22 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l23 1-17 ti abs bib

L23  ANSWER 1 OF 17  HCAPLUS  COPYRIGHT 2010 ACS on STN
TI   Maternal pneumococcal conjugate immunization protects infant chinchillas
     in the pneumococcal otitis media model
AB   Infant immunization with pneumococcal polysaccharide-protein conjugate
     vaccines (PCVs) is unlikely to elicit protective serum antibody concns.
     during the first 4-6 mo of life, when recurrent pneumococcal otitis media
     (POM) often begins.  We therefore investigated a maternal pneumococcal
     immunization strategy to prevent early infant POM.  Pregnant chinchillas
     (dams) received injections of heptavalent PCV or saline.  Post-partum
     maternal and infant (kits) blood samples were obtained, and kits were
     subsequently challenged by intranasal inoculation of a vaccine-type
     pneumococcal strain (19F).  Anti-pneumococcal capsular
     polysaccharide IgG antibody (Ab) concentration was measured using an
     ELISA in maternal and kit serum samples.  Immunized dams and their kits
     had significantly higher Ab titers than control dams and their kits.
     Antibody titer in kits declined with a half-life of 12 days.  Maternal
     immunization significantly reduced both the incidence (p = 0.05)
     and severity (p < 0.01) of exptl. POM in chinchilla kits, and was 82%
     effective at preventing mortality from invasive pneumococcal disease.
     Pre-challenge serum Ab concentration in kits was the single best predictor of
POM
     severity (r= -0.66).  This experiment strongly supports the hypothesis that
     maternal immunization with PCV will reduce the burden of early infant POM
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and invasive pneumococcal disease.
AN 2002:557944 HCAPLUS <<LOGINID::20100428>>
DN 137:323885
TI Maternal pneumococcal conjugate immunization protects infant chinchillas in the pneumococcal otitis media model
AU Hajek, David M.; Quartey, Moses; Giebink, G. Scott
CS Otitis Media Research Center and the Departments of Pediatrics and Otolaryngology, University of Minnesota School of Medicine, Minneapolis, MN, USA
SO Acta Oto-Laryngologica (2002), 122(3), 262-269
CODEN: AOLAAJ; ISSN: 0001-6489
PB Taylor & Francis
DT Journal
LA English
OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Clinical efficacy of pneumococcal vaccine in the elderly: a randomized, single-blind population-based trial
AB Our objective was to study the efficacy of pneumococcal capsular polysaccharide vaccine among the elderly by use of a population-based intervention in one township, Varkaus, Eastern Finland. A randomized, controlled trial in which elderly inhabitants (aged 60 yr or older) of the catchment area were randomized to receive either pneumococcal and influenza vaccines (PI group = vaccinated) or influenza vaccine alone (I group = controls) and offered participation. The response rate was 67.4%. The PI group consisted of 1,364 persons and the I group of 1,473 persons. The vaccinations were performed in the municipal health center in the fall of 1982, and all elderly inhabitants were followed for 3 yr for the development of radiol. confirmed pneumonia. Pneumococcal etiol. was identified by serol. methods. The incidence of pneumonia was 18.8 per 1,000 person-years in the PI group (73 pneumonia episodes) and 16.6 per 1,000 person-years in the I group (69 episodes). Pneumococcal etiol. was found in 27 episodes in the PI group (incidence 7.0 per 1,000 person-years) and in 36 episodes in the I group (incidence 8.6 per 1,000 person-years). In controls (I group) the incidence of pneumococcal pneumonia was significantly higher among persons with increased risk for contracting pneumonia (19 per 1,000 person-years) than among controls with low risk status (4 per 1,000 person-years). No significant protection from pneumococcal pneumonia was found in the study group as a whole (vaccine efficacy 15%, 95% CI-43% to 50%). However, in persons with medical risk factors for contracting pneumonia, there was a statistically significant protective efficacy of 59% (95% CI, 6% to 82%). Pneumococcal vaccination significantly reduced the incidence of pneumococcal pneumonia in elderly persons at increased risk for contracting pneumonia. This increased/high-risk category comprised 34% of the population aged 60 yr or older. Because targeted vaccination of this large group may be difficult to organize in an efficient manner, vaccinating all elderly persons may be the best strategy to prevent this rather common and often fatal disease.
AN 1997:728428 HCAPLUS <<LOGINID::20100428>>
DN 128:33476
OREF 128:6569a,6572a
TI Clinical efficacy of pneumococcal vaccine in the elderly: a randomized, single-blind population-based trial
AU Koivula, Irma; Sten, Marja; Leinonen, Maija; Makela, Pirjo Helena
CS Dep. Med., Health Cent. of Varkaus, Kuopio Univ. Hosp., Natl. Public Health Inst, Natl. Public Health Inst., Helsinki, Finland
SO American Journal of Medicine (1997), 103(4), 281-290

CODEN: AJMEAZ; ISSN: 0002-9343
PB Excerpta Medica
DT Journal
LA English
OSC.G 28 THERE ARE 28 CAPLUS RECORDS THAT CITE THIS RECORD (28 CITINGS)
RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Characterization of a human monoclonal immunoglobulin M (IgM) antibody (IgMBEN) specific for Vi capsular polysaccharide of Salmonella typhi
AB A search for human monoclonal antibodies to protective antigens of bacteria revealed an IgM λ chain [IgM(λ); designated IgMBEN] reactive with the Vi capsular polysaccharide of Salmonella typhi. Vi, a linear homopolymer of α(1→4) GalApNAc that is O acetylated at C-3, is a licensed vaccine for typhoid fever. Immunol. properties of IgMBEN were compared to those of burro globulin prepared by i.v. injections of S. typhi (B339-340). IgMBEN and B339-340 yielded identical precipitin lines with Vi by double immunodiffusion. IgMBEN and B339-340 produced similar precipitation results with Vi and its derivs. prepared by de-O-acetylation, carboxyl reduction, and removal or replacement of the N-acetyl at C-2 with O-acetyl. B339-340 yielded maximal precipitation with Vi (0.41 mg of antibody per mL with 1.4 μg of Vi); next was carboxyl-reduced, O-acetylated Vi, which precipitated 0.325 mg of antibody per mL with 2.5 μg of Vi. IgMBEN yielded maximal precipitation with de-O-acetylated, carboxyl-reduced Vi (.apprx.11.0 mg of antibody per mL with .apprx.1.3 μg of antigen); next were de-O-acetylated Vi(9.89 mg/mL) and Vi (9.19 mg/mL). The precipitin curves and equivalence points of these three antigens were similar. Pneumococcus type 1, which contains GaApNAc, did not precipitate with Vi or its derivs. These slight differences in specificity between IgMBEN and B339-340 were related to the proposed structure of Vi. The authors plan to use IgMBEN as a reference for measurement of vaccine-induced Vi antibodies.
AN 1995:904940 HCAPLUS <<LOGINID::20100428>>
DN 123:311979
OREF 123:55895a,55898a
TI Characterization of a human monoclonal immunoglobulin M (IgM) antibody (IgMBEN) specific for Vi capsular polysaccharide of Salmonella typhi
AU Liao, Jerry; Nickerson, Katherine G.; Bystricky, Slavomir; Robbins, John B.; Schneerson, Rachel; Szu, Shousun C.; Kabat, Elvin A.
CS Dep. of Microbiology and Neurology, Columbia Univ., New York, NY, 10032, USA
SO Infection and Immunity (1995), 63(11), 4429-32
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L23 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunogenicity of Streptococcus pneumoniae type 14 capsular polysaccharide: influence of carriers and adjuvants on isotype distribution
AB This project investigated the effects of novel carriers and adjuvants on the isotype of murine IgG antibody to pneumococcal capsular polysaccharide type 14 (S14PS). S14PS conjugated to bovine serum albumin induced weak antibody response which was 100% IgG1 following

injection without adjuvant. The same polysaccharide conjugated to flagella of Salmonella typhi induced an antibody response which was 88% IgG3. S14PS-bovine serum albumin was injected with block copolymer L121 or Quil A in squalane-in-water emulsions. The copolymer L121 was at least as effective as Quil A or complete Freund adjuvant in inducing IgG antibodies. IgG1 was the dominant subclass for all. Addition of monophosphoryl lipid A, but not the threonyl derivative muramyl dipeptide or nontoxic Rhodopseudomonas sphaeroides lipopolysaccharide, to copolymer L121 increase production of the IgG2a, IgG2b, and IgG3 subclasses. S14PS-flagella with copolymer L121 induced higher titers with a markedly altered isotype distribution: 13% IgG1, 52% IgG2a, 6% IgG2b, and 29% IgG3. Monophosphoryl lipid A added to L121 reduced IgG1 antibody to 5%, but increased IgG2a antibody to 14%, IgG2b antibody to 3%, and IgG3 antibody to 78%. Thus, both the carrier and the adjuvant can influence the titer and isotype distribution of antipolysaccharide antibody responses.

AN 1991:589571 HCAPLUS <<LOGINID::20100428>>
DN 115:189571
OREF 115:32269a,32272a
TI Immunogenicity of Streptococcus pneumoniae type 14 capsular polysaccharide: influence of carriers and adjuvants on isotype distribution
AU Van de Wijgert, J. H. H. M.; Verheul, A. F. M.; Snippe, H.; Check, I. J.; Hunter, R. L.
CS Eijkman-Winkler Lab. Med. Microbiol., Utrecht Univ., Utrecht, Neth.
SO Infection and Immunity (1991), 59(8), 2750-7
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)

L23 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunochemical studies on pneumococcal type 37 capsular polysaccharide
AB Pneumococcal type 37 capsular polysaccharide was obtained free of contaminants by affinity chromatog. on Con-A, wheat germ agglutinin, Maclura pomifera lectin and HOPC-8 mouse myeloma protein affinity columns. The immunochem. reactivity of native and periodate oxidized borohydride reduced type 37 polysaccharide antigen with polyclonal rabbit and monoclonal mouse anti-Pn37 hybridoma antibodies was studied by quant. precipitation Quant. hapten inhibition studies, employing the isomeric series of α- and β-(1→2), (1→3), (1→4) and (1→6)-linked glucobioses as competitive inhibitors of antibody precipitation establish a specificity for anti-Pn37 antibody directed at least in part, against the Glc β(1→2) Glc (sophorosyl) unit. A high mol. weight, D-glucose-containing polysaccharide antigen, cross-reactive with rabbit anti-Pn37 is reported which was found to occur in the culture medium of 7 of 19 of Actinomyces examined
AN 1989:133225 HCAPLUS <<LOGINID::20100428>>
DN 110:133225
OREF 110:21975a,21978a
TI Immunochemical studies on pneumococcal type 37 capsular polysaccharide
AU Allen, Peter Z.; Bowen, William H.
CS Sch. Med. Dent., Univ. Rochester, Rochester, NY, 14642, USA
SO Molecular Immunology (1988), 25(10), 1011-17
CODEN: MOIMD5; ISSN: 0161-5890
DT Journal
LA English

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L23 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Synthesis and physicochemical and immunological characterization of pneumococcus type 12F polysaccharide-diphtheria toxoid conjugates
AB A scheme for the synthesis and purification of conjugates, composed of the type 12F capsular polysaccharide of Streptococcus pneumoniae (Pn12F) and diphtheria toxoid, is described. Pn12F is a branched-chain copolymer composed of a hexasaccharide repeating unit containing an aminouronic acid, N-acetylmannoseaminouronic acid. Sulfhydryl groups were introduced into Pn12F by forming an amide bond between cystamine and carboxyl groups of N-acetylmannoseaminouronic acid in the presence of a carbodiimide. The disulfide moiety of cystamine was reduced to form the cysteamine derivative of Pn12F which was, in turn, covalently bound to diphtheria toxoid by using the heterobifunctional linker N-succinimidyl-3-(2-pyridylthio)propionate. Unbound, high-mol.-weight Pn12F was removed from the conjugate by hydrophobic interaction chromatog. through octyl Sepharose by using n-octyl-β-D-glucopyranoside as the eluent. In young outbred mice, Pn12F did not elicit detectable serum antibodies. Pn12F-diphtheria toxoid, in contrast, elicited antibodies after 2 injections and had T-cell-dependent properties as evidenced by a response to priming and by its ability to elicit booster responses. This scheme seems applicable to the synthesis of conjugates with other capsular polysaccharides containing aminouronic acids.
AN 1988:556035 HCAPLUS <<LOGINID::20100428>>
DN 109:156035
OREF 109:25833a,25836a
TI Synthesis and physicochemical and immunological characterization of pneumococcus type 12F polysaccharide-diphtheria toxoid conjugates
AU Fattom, Ali; Vann, Willie F.; Szu, Shousun C.; Sutton, Ann; Li, Xiuru; Bryla, Dolores; Schiffman, Gerald; Robbins, John B.; Schneerson, Rachel
CS Lab. Dev. Mol. Immun., Natl. Inst. Child Health Hum. Dev., Bethesda, MD, 20892, USA
SO Infection and Immunity (1988), 56(9), 2292-8
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L23 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Induction of pulmonary inflammation by components of the pneumococcal cell surface
AB Using a rabbit model of exptl. pneumonitis, the components on the surface of the pneumococcus that incite pulmonary inflammation were identified. Rabbits were challenged intratracheally with live pneumococci, capsular polysaccharide, purified cell walls, or cell wall subcomponents. Leukocytosis and elevation of protein concentration was quantitated in bronchial lavage fluid during the 24 h after challenge. Of the pneumococcal surface components tested, cell wall prepns. had the highest specific activity in inducing inflammation; abnormalities in bronchial lavage fluid cytochem. appeared rapidly and in a dose-dependent manner. Cell wall building blocks and the products of penicillin-induced hydrolysis of the cell wall were also highly inflammatory, indicating that inflammation can be generated by disruption of the cell wall during lysis of bacteria by beta-lactam antibiotics. Administration of inhibitors of arachidonic acid metabolism suggested that inhibition of the lipoxygenase pathway reduced inflammation associated with cell walls. It is proposed that pulmonary inflammation during pneumococcal pneumonia arises in large part from the interaction of the bacterial cell wall with complement and noncomplement-mediated host defenses.

AN 1987:194494 HCAPLUS <<LOGINID::20100428>>
DN 106:194494
OREF 106:31517a,31520a
TI Induction of pulmonary inflammation by components of the pneumococcal cell surface
AU Tuomanen, E.; Rich, R.; Zak, O.
CS Rockefeller Univ., New York, NY, USA
SO American Review of Respiratory Disease (1987), 135(4), 869-74
CODEN: ARDSBL; ISSN: 0003-0805
DT Journal
LA English
OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

L23 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Identification of D-galacturonic acid in the specific capsular polysaccharide of pneumococcal type XXV
AB S XXV, the principle type-specific antigen of pneumococcal type XXV was hydrolyzed, subjected to chromatog. and the portion containing the uronic acid was evaporated to dryness. The residue was converted into the Me ester Me glycoside, reduced with KBH4, hydrolyzed, and the product identified as D-galactose by chromatog. and reaction with Galactostat (galactose oxidase) reagent.
AN 1976:492004 HCAPLUS <<LOGINID::20100428>>
DN 85:92004
OREF 85:14751a,14754a
TI Identification of D-galacturonic acid in the specific capsular polysaccharide of pneumococcal type XXV
AU Das, Amalendu; Heidelberger, Michael; Brown, Rachel
CS Sch. Med., New York Univ., New York, NY, USA
SO Carbohydrate Research (1976), 48(2), 304-5
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L23 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Interaction of concanavalin A with the capsular polysaccharide of pneumococcus type XII and isolation of kojibiose from the polysaccharide
AB The disaccharide kojibiose (2-O-α-D-glucopyranosyl-D-glucose) was isolated from a partial acid hydrolyzate of the capsular polysaccharide of type XII pneumococcus. Acetolysis of the polysaccharide provided α-kojibiose octacetate. These findings confirmed several decades of immunochem. support for the presence of kojibiosyl residues in the type XII pneumococcal polysaccharide. A precipitin curve was generated when the jack bean lectin, concanavalin A, interacted with specific polysaccharide (SXII), but no precipitate formed with periodate oxidized, borohydride-reduced SXII. Since oxidation by periodate destroyed kojibiosyl residues and this oligosaccharide was a good inhibitor of the reaction of SXII with concanavalin A, it is probable that this disaccharide forms the basis for the interaction of SXII with concanavalin A.
AN 1974:130238 HCAPLUS <<LOGINID::20100428>>
DN 80:130238
OREF 80:20985a,20988a
TI Interaction of concanavalin A with the capsular polysaccharide of pneumococcus type XII and isolation of kojibiose from the polysaccharide
AU Goldstein, I. J.; Cifonelli, J. A.; Duke, Jodie
CS Dep. Biol. Chem., Univ. Michigan, Ann Arbor, MI, USA
SO Biochemistry (1974), 13(5), 867-70

CODEN: BICHAW; ISSN: 0006-2960
DT Journal
LA English

L23 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Capsular polysaccharide of Pneumococcus type II
GI For diagram(s), see printed CA Issue.
AB The title polysaccharide (I) was acetalated with MeOCH:CH2, reduced with LiAlD4, and the acetal groups removed. The resultant carboxyl-reduced I was acetylated and oxidized with CrO3 in AcOH to degrade β-glycosides specifically. Methylation anal. of the product before and after oxidation showed that one 3-O-substituted L-rhamnosyl residue is β-linked and that the other 5 residues are α-linked. The results established for I the structural elements (II) and (III) and a tentative structure for I is presented.
AN 1974:60112 HCAPLUS <<LOGINID::20100428>>
DN 80:60112
OREF 80:9757a,9760a
TI Capsular polysaccharide of Pneumococcus type II
AU Larm, Olle; Lindberg, Bengt; Svensson, Sigfrid
CS Dep. Org. Chem., Stockholm Univ., Stockholm, Swed.
SO Carbohydrate Research (1973), 31(1), 120-6
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L23 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Immunochemistry of type XIV pneumococcus capsular polysaccharide oxidized by D-galactose oxidase
AB Type XIV pneumococcus specific capsular polysaccharide, SXIV, is made of a main chain of D-galactose and N-acetylglucosamine and three types of side chain residues: one consists of D-glucose and the other two consist one of α D-galactose and the other of lactose, containing β galactose in the terminal end. Under certain conditions, D-galactose oxidase can attack 1 or 2 of these terminal galactoses, oxidizing the hydroxy groups in position six to aldehdes. Further oxidation to carboxyl groups can be obtained by treatment with NaClO2 in acidic conditions. By variations of these procedures 3 different derivs. of SXIV can be obtained which precipitate different amts. of antibody from an anti-SXIV horse serum: SXIV untreated, ppts. 650 μg of antibody N/ml; SXIV withone galactose oxidized to aldehyde ppts. 641 μg; SXIV with 2 galactoses oxidized to aldehydes ppts. 603 μg; SXIV with 2 galactoses converted to galacturonic acid ppts. 500 μg, and SXIV oxidized with periodate ppts. 274 μg. SXIV with 2 terminal galacturonic acid residues ppts. also in antipneumococcus Type I horse serum. The internal galactoses in the main chain are not attacked by the enzyme. The aldehyde groups can be reduced to alc. again with NaBH4 without loss of immunol. specificity with respect to untreated SXIV.
AN 1972:550432 HCAPLUS <<LOGINID::20100428>>
DN 77:150432
OREF 77:24731a,24734a
TI Immunochemistry of type XIV pneumococcus capsular polysaccharide oxidized by D-galactose oxidase
AU Estrada-Parra, Sergio; Gomez, Irma
CS Esc. Nac. Cienc. Biol., Inst. Politec. Nac., Mexico D. F., Mex.
SO Immunochemistry (1972), 9(11), 1095-101
CODEN: IMCHAZ; ISSN: 0019-2791
DT Journal

LA English

L23 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Capsular polysaccharide of type I pneumococcus
. I. Purification and chemical modification
AB The capsular polysaccharide (SI) of Type I
pneumococcus was purified by chromatog. on DEAE-Sephadex and by
recovery from its specific precipitate with homologous antibody. Disadvantages
of direct acid hydrolyses of SI were overcome by reduction of many of the
hexuronic acid residues to hexose, and by N-acetylation of SI. These and
other described modifications decrease the amts. of antibody precipitated from
antipneumococcal Type I sera. D-Glucose, hitherto tentatively suggested as
a component, is present. Deamination of SI by HONO yields at least 6
products, 2 of which indicate that SI contains residues of the
disaccharides, galacturonosylgalactosamine and galacturonosylglucosamine.
Residues of 2-amino-2-deoxyhexosylglucose are also indicated. An
oligosaccharide from partially carboxyl-reduced SI is
tentatively assigned the partial structure, galacturonosyl-(1 →
3)-glucosaminyl-(1 → 3)-galacturonic acid. 46 references.
AN 1967:513772 HCAPLUS <<LOGINID::20100428>>
DN 67:113772
OREF 67:21439a,21442a
TI Capsular polysaccharide of type I pneumococcus
. I. Purification and chemical modification
AU Guy, R. C. E.; How, M. J.; Stacey, Maurice; Heidelberger, Michael
CS Univ. Birmingham, Birmingham, UK
SO Journal of Biological Chemistry (1967), 242(21), 5106-11
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L23 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Cross-reactivity of ketha gum and pneumococcal Type I; short cut to a
constituent of a polysaccharide
AB Ketha gum is reported to contain arabinose, galactose, xylose, an
unidentified neural sugar, and glucuronic acid, and its marked
cross-reaction with Type I antipneumococcal horse serum indicates that
D-galacturonic acid must be an addnl. component. The capsular
polysaccharide of Type I pneumococcus, the determinant
of immunological specificity, consists of more than 50% D-galacturonic
acid. Chromatography of hydrolyzates of ketha gum confirmed the presence
of arabinose, galactose, and xylose, and furnished spots with the
mobilities of galacturonic and 4-O-methylglucuronic acids. Traces of
glucuronic acid appeared only under conditions such that demethylation of
the 4-O-methyl acid might have occurred. Hydrolysis of larger amts.
furnished D-galacturonic acid, in a sirupy state, [α]D +32°
instead of +51°, and 4-O-methyl-D-glucuronic acid, [α]D
+20° instead of +35°. The latter, especially if present as
nonreducing end-groups, would account for the strong precipitation of the gum
in
Type II antipneumococcal horse serum. When the gum was esterified,
reduced, and hydrolyzed, the 2 acids disappeared almost entirely,
a component corresponding to 4-O-methylglucose was observed, and the
hexose content was increased. Oxidation of the gum with periodate, followed
by reduction and hydrolysis, caused the disappearance of the
4-O-methylglucuronic acid and most of the galacturonic acid. Comparison
of analysis and chromatograms of the original gum with those of samples
recovered from the specific ppts. with Types I and II antiserum showed
little or no fractionation.
AN 1963:42193 HCAPLUS <<LOGINID::20100428>>
DN 58:42193

OREF 58:7243a-c
TI Cross-reactivity of ketha gum and pneumococcal Type I; short cut to a constituent of a polysaccharide
AU Heidelberger, M.; Tyler, Jean M.
CS Rutgers Univ., New Brunswick, NJ
SO Immunology (1962), 5, 666-72
CODEN: IMMUAM; ISSN: 0019-2805
DT Journal
LA Unavailable

L23 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Synthesis of type III pneumococcal polysaccharide by suspensions of resting cells
AB The capsular polysaccharide (SIII) of type III pneumococci was removed by the SIII enzyme prepared by a method similar to that of Dubos (C.A. 29, 6919.4) and the cells thus deprived of preformed SIII were washed and examined for capacity to synthesize SIII anew. The washed, decapsulated cocci lost their capacity to be agglutinated in type-specific antiserum but again became agglutinable and formed readily measurable amts. of SIII after suspension in a solution containing only glucose and salts. Maximum SIII synthesis required glucose, Mg, K, P, and O. Other fermentable sugars could be substituted for glucose but the yield of SIII was reduced. Synthesis of SIII occurred anaerobically but was increased four- to five-fold by oxygenation of the suspension. The effects of pH and of enzyme poisons, HgCl2, iodoacetate, dinitrophenol, HCN, F, azide, arsenite, and malonate on the capacity to form SIII are described.
AN 1953:62402 HCAPLUS <<LOGINID::20100428>>
DN 47:62402
OREF 47:10616a-d
TI Synthesis of type III pneumococcal polysaccharide by suspensions of resting cells
AU Bernheimer, Alan W.
CS New York Univ., New York, NY
SO Journal of Experimental Medicine (1953), 97, 591-600
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal
LA Unavailable
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L23 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Chemoimmunological properties of synthetic polyuronic acids. I. Polyuronic acids from cellulose
AB Synthetic polyuronic acids (I) from oxidation (about 50%) of cellulose by NO2 (cf. K. Maurer and G. Drehfahl, C.A. 38, 1210.9) resemble the capsular polysaccharide of type III pneumococcus . p-NO2C6H4Br was coupled to I (1:4), and reduced to the amino compound with NaHSO3. This was diazotized and coupled to beef serum globulin (II) and to egg albumin, (III), to give (IV) and (V), resp., (cf. K. Landsteiner, C.A. 30, 3075.8). IV and V when injected into rabbits cause production of antisera (VI) and (VII), resp. Both IV and V were precipitated by VI or VII, but only VI precipitated II, and neither precipitated III. The agglutinating action of the type specific pneumococcus antisera was not diminished by the presence of I; the slight restraint of type III antiserum is probably due to partial decomposition of I. VI and VII show no agglutinating action toward the pneumococci. VI was precipitated with an equal volume of 0.9% NaCl solution, and 3 cc. of this solution was added to the centrifuge sediment of the pneumococci, mixed, allowed to stand for 4 hrs., and centrifuged. The precipitation titer toward IV was compared with that

of the unabsorbed VI and found to be undiminished. These results, together with previously known cross-reactions of carbohydrate haptens with pneumococcus antisera type II and type III, show that a type III determinant cellobiuronic acid must have a free OH at C4, and a type II determinant at C3 and C4. So, artificial antigens with cellobiuronic acids produce both type II and type III antibodies, while polybiuronic acids (1-3 bond) only form type II.

AN 1949:22994 HCAPLUS <<LOGINID::20100428>>
DN 43:22994
OREF 43:4338g-i,4339a-b
TI Chemoimmunological properties of synthetic polyuronic acids. I. Polyuronic acids from cellulose
AU Westphal, Otto; Maurer, Kurt; Schmidt, Hans
SO Hoppe-Seyler's Zeitschrift fuer Physiologische Chemie (1947), 282, 127-35
CODEN: HSZPAZ; ISSN: 0018-4888
DT Journal
LA Unavailable

L23 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Chemoimmunological studies on the soluble specific substance of pneumococcus. V. The structure of the type III polysaccharide
AB cf. C. A. 33, 8672.7. Hydrolysis of the reduced methylated capsular polysaccharide of type III pneumococcus yields the known 2,3,6-trimethylglucose and 2,4-dimethyl-α- and β-methylglucosides. The methylated aldobionic acid units are linked through position 3 of the methylated glucuronic acid. In the polysaccharide, glucose is linked to the 3rd C atom of the glucuronic acid which in turn is linked to the 4th C atom of the 2nd glucose mol. The glucuronosidic linkage has the β configuration and the configuration between the aldobionic acid units is assumed to be of the same type. It is of interest to find the linkages of the saccharide units alternating between positions 3 and 4. Methylated type III polysaccharide, [α]D24 -35.8° (2% in CHCl3-absolute EtOH 4:1). Me ester, m. 185-200°, [α]D23 -36.8° (1% in CHCl3). Reduced methylated polysaccharide, [α]D23 -31 (0.7% in H2O), -15.6° (0.6% in CHCl3).
AN 1941:32546 HCAPLUS <<LOGINID::20100428>>
DN 35:32546
OREF 35:5098e-h
TI Chemoimmunological studies on the soluble specific substance of pneumococcus. V. The structure of the type III polysaccharide
AU Reeves, Richard E.; Goebel, Walther F.
SO Journal of Biological Chemistry (1941), 139, 511-19
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA Unavailable
OSC.G 26 THERE ARE 26 CAPLUS RECORDS THAT CITE THIS RECORD (26 CITINGS)

L23 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2010 ACS on STN
TI Chemo-immunological studies on conjugated carbohydrate-proteins. XII. The immunological properties of an artificial antigen containing cellobiuronic acid
AB cf. C. A. 31, 7110.3. In order to understand more fully the role which the aldobionic acids, the fundamental building stones of certain bacterial polysaccharides, play in immunological phenomena, immunological properties of antigens containing these acids were studied. Acetobromo cellobiose (22 g.) in 75 cc. CHCl3, 6.6 g. of p-O2NC6H4CH2OH (I) and 7.2 g. Ag2O give 7.6 g. of the hexa-Ac derivative, m. 178-80°, [α]D22 -34.8° (CHCl3, c 1%), of p-nitrobenzyl β-cellobioside, m. 199-200°, [α]D20 -32.3° (H2O, c 1%), hydrolysis being

effected by Ba(OMe)2 in MeOH at 0°; catalytic reduction yields the p-NH2 derivative, m. 188-90° (decomposition), [α]D22 -35.2° (H2O, c 0.5%).-Me acetobromo cellobiuronate (11.9 g.) and I as above give 3.8 g. of the hexa-Ac derivative, pale yellow, m. 192-3°, [α]D20 -41.7° (CHCl3, c 0.6%), of p-nitrobenzyl β-glycoside of Me cellobiuronate, m. 188-9°, [α]D22 -48.1° (MeOH, c 1%); reduction and hydrolysis give p-aminobenzyl β-glucoside of cellobiuronic acid, isolated as the Ba salt, amorphous, [α]D22 -44° (H2O, c 0.5%). Immunizing antigens were prepared from the diazo compds. from the above NH2 derivs. and also of glucose and glucuronic acid with the globulin fraction of normal horse serum. These antigens in rabbits give rise to antibodies which are specific and characteristic of the saccharide constituent. The antiserum to cellobiuronic acid shows broader serological cross reactions than does that to cellulose. An antiserum to the cellobiuronic acid antigen ppts. the capsular polysaccharide of Type III pneumococcus when the latter is combined with a heterologous protein. The cellobiuronic acid test antigen ppts. vigorously in antipneumococcus serums Types II, III and VIII. The mechanism of these reactions is discussed.

AN 1938:65788 HCAPLUS <<LOGINID::20100428>>
DN 32:65788
OREF 32:9256g-i,9257a-b
TI Chemo-immunological studies on conjugated carbohydrate-proteins. XII. The immunological properties of an artificial antigen containing cellobiuronic acid
AU Goebel, Walther F.
SO Journal of Experimental Medicine (1938), 68, 469-84
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal
LA Unavailable
OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)